Learning cultures in cyberspace

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Abstract

This thesis is a study of emerging learning cultures. Its focus is on students and teachers who are engaged in using internet technologies for learning in higher education in the United Kingdom. The thesis provides an exploration of theoretical approaches to the cultural impact of new technologies, drawing on cultural, cybercultural and educational theory. It applies these theoretical insights to interview texts generated through discussions with learners and teachers. Its contribution lies in the originality of its empirical material and of the insights applied to their analysis, and in its application of cultural and cybercultural theory to the area of online learning and teaching.

Dedicated to my Mum and Dad

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Images

What am I that I should essay to hook the nose of this leviathan! The awful tauntings in Job might well appal me. 'Will he (the leviathan) make a covenant with thee? Behold the hope of him is vain!'. But I have swam through libraries and sailed through oceans; I have had to do with whales with these visible hands; I am in earnest; and I will try.
Melville, *Moby Dick*

Chapter 1
Introduction

Culture and instrumentality

My thesis attempts to open education in cyberspace to the question of culture. It sees in the rise of computer mediated communication and digital textuality a shift which involves us – learners and teachers in higher education – in a serious engagement with a new and often profoundly disquieting cultural space.

That online spaces involve new cultural formations – that they involve changes in the ways we are constituted as subjects, and in the ways in which we perceive our tasks as students and academics – is something which, I believe, is widely neglected by the practitioners and theorists of online learning. Here, the tendency is often to view technologies for learning as 'tools' which we 'use' (for better or worse) from a position of relative autonomy. My approach is rather to see them as artefacts by which are enabled the formation of new environments and new modes of constructing meaning, which in turn forge changes in the way we, as subjects, are constituted. From the political promises of increased efficiency, wider 'markets' and reduced costs of 'e-learning' (often presented within the terms of widening access and the development of student-centred learning) to the metaphors and practices nurtured in our virtual learning environments (virtual classrooms, virtual campuses, desktops, tutorial rooms), we continue to view online spaces simply as offering a new means of delivering familiar goods. Poster refers to this as the 'culture of instrumentality', and what he says about the state and the economy could apply equally to education online:

> In their approach to the Internet, the state and the economy frame it as something that is useful to them, something that may improve their pre-existing practices, make things go faster or more smoothly. Or not. (Poster, 2001a: 2)

The problem with such an approach, and the starting point for my own research, is that:

> As long as we remain within an instrumental framework we cannot question it, define its limits, or look to new media in relation to how it might generate new cultures. In this way, the culture of instrumentality obstructs research on the Internet, research that might open up the question of culture. (3)

Without a concept of culture, Poster argues, the study of new media is destined to adopt, by 'default', the interests of society's dominant institutions (2). If this is true in the case of new media generally, it is even more so within discussions of the place of technology within higher education. Throughout the relatively short history of the internet, vibrant and heated discussions have been taking place among new media and cybercultural theorists around the social and cultural effects of the new technology on textuality, gender, politics, history, identity, community, democracy and embodiment (for example, Zuboff, 1988, Levidow and Robins, 1989, Delany and Landow, 1991, Haraway, 1991b, Lanham, 1993, Birkerts, 1994, Landow, 1994, Moulthrop, 1994, Balsamo, 1995, Stone, 1995, Castells, 1996, Nunberg, 1996, Turkle, 1996, Aarseth, 1997, Landow, 1997, Murray, 1997, O'Donnell, 1998, Plant, 1998, Smith and Kollock, 1998, Coyne, 1999, Graham, 1999, Hayles, 1999, Lunenfeld, 1999, Ryan, 1999a, Bell and Kennedy, 2000, Miller, 2000, Slevin, 2000, Herman and Swiss, 2000a, Bolter, 2001, Poster, 2001a, Poster, 2001b). Yet these debates have had relatively little effect on discussion about the cultural changes forged by technological change within higher education. Here, the questions most often asked of technology are those Lyotard identified a quarter of a century ago as indicative of the extension, through technology, of the performativity principle within higher education – 'What use is it?', 'Is it saleable?', 'Is it efficient?' (Lyotard, 1979: 51).

This, what Peters calls 'the hyped-instrumentalist discourse typified by a 'gee-whiz' ethos touting efficiency gains and the lasting technical transformation of education' (Peters, 2002: 403) tends to dominate not only UK policy

documentation relating to the adoption of 'e-learning' within higher education (for example, see DfES, 2003, HEFCE, 2003, SHEFC, 2003) but also much of the research literature relating to learning technology (Peters offers the content of the journal *Educational Technology and Society* as an example). Its pervasion of the discourses adopted by 'learning technologists' and other adopters of technology-mediated approaches to learning within universities is highlighted by Cousin, who focuses on the common claim of these groups that 'the pedagogy must lead the technology' (Cousin, in press). Such a stance – an instrumentalist position almost fully normalised within learning technology discourse – assumes the possibility of a thorough separation of pedagogical desire and technological environment, human subject and technological artefact. As Cousin reveals:

> Reassurances about the primacy of pedagogy and the purely enhancement value of technology offer false protection to academics because they promise a stable transition in an inherently unstable process of change from one media age to another, and they promise no loss where there is always loss. (in press)

The disquietude which, as this thesis will demonstrate, is felt by learners and teachers working within internet learning spaces is, partly, to do with the losses Cousin refers to – of immediacy, of embodied presence, of the sense of the university as a stable, physical entity rather than a transformable, transferable process. It is also, however, to do with the character of the possible gains, which tend to revolve around the introduction of uncertainty where there was certainty, mutability where there was stability, and contestation where there was consensus.

There are several locations at which such potential gains might be generated: the anonymity of the online discussion where identities, textually constructed, gain a fluidity impossible in the face to face classroom; the mutable hypertext document in which the ability to make connections and skim textual surfaces becomes more appropriate than the close and careful reading nurtured through centuries of print text; the openness of digital text, image and artefact to

copying, altering, reformulation and re-appropriation and the challenge this poses to our ways of thinking about plagiarism and intellectual property; the disruption and equalisation of the relationships between producer and consumer, author and reader, teacher and learner that we see repeatedly taking place within and through the digital. These potential gains, and many others, all present deep challenges to the ways in which higher education has traditionally been conducted and to its place in society. Thinking in terms of a digital culture involves re-thinking many of the assumptions upon which our institutions of higher education are built. To consider learning technologies in terms of instrumentality presents us with a rather more manageable project yet, as Joyce has pointed out, to take such a position is to indulge in certainties which no longer exist:

> Hypertext environments and networked collaborations change in fine grain the contour of learning itself, and we no longer have the luxury of thinking of computers as mere tools in our classrooms. (Joyce, 1995: 119).

Learning cultures in cyberspace

The stance I take in this thesis is that digital textuality and electronically mediated communication are involving us in a paradigm shift in higher education (Castells, 1996). As I have already hinted, the digital presents a challenge to many of the practices, procedures and epistemologies entrenched within, and constitutive of, the university. Thus higher education is in a paradoxical position in that, while substantial resources are thrown at the development of 'e-learning' in its instrumental form, the implications of a more exploratory 'digital pedagogy'[1] are likely to be generally undermining to the established academic agenda, as this thesis will demonstrate.

[1] I further explore 'digital pedagogy'– the imaginative, creative, time-consuming attempt to develop online learning within the terms of an evolving digital culture – in chapter five.

It is symptomatic of the uneasiness of this position that, while on the one hand money and time are poured into the development of technologically mediated learning, on the other a range of discourses and practices converge within the academy to *deprivilege* the kinds of activities, texts and identities experienced online, and therefore to deprivilege online learning itself. Much of this thesis is concerned with the exploration of these resistant discourses. The awkwardness of the position in which the university finds itself is reflected in multiple modes in the research I present here. In chapter three it is expressed in terms of the clash between subjectivity in its Cartesian mode and the fragmented, textually-constructed model of identity formation. In chapter four it revolves around the relation between the stable print text (and the version of legitimate knowledge it incorporates) and the mutable digital text. In chapter five it appears in my analysis of the relation between the regulated spaces of the virtual learning environment and the open territories of web. In chapter six it appears in the relation of digital to 'analogue' modes of authorship, while in chapter seven it emerges through a consideration of embodiment and the conflicts involved in the various operations of presence and distance.

What I see as the university's simultaneous embrace of and resistance to learning technology opens up vistas of possibility and then, in the same movement, closes them off. So, where learners and teachers might work with the open, unregulated, unmanageable web, we substitute the sealed-off, monitored, highly-structured virtual learning environment. Where we might explore the unstable, connectable, reader-controlled hypertext, we often prefer to develop the page-turning, author-determined online print simulation. Where we might relish our access to the manipulable, freely-available digital text and image, we turn instead to frozen, controllable (and more easily copyright-protected) formats like pdf. Where we might have risky, messy, anonymous chat, we prefer structured, identity-tagged, threaded discussion. And where we might begin to explore the pedagogical possibilities of textually-constructed, transformable identity, we instead affirm our dependence on embodied presence through such concepts as 'blended learning'. I do not suggest that in making

these choices we are always wrong, but rather that in choosing structure and containment over openness and risk, we neglect to engage with much that is most compelling, and most pressingly *different*, about our digital environments and their pedagogical potential.

In choosing to explore learning cultures in cyberspace, therefore, I wish to look to a technological future for the university which does not depend on the values of performativity and what Pelletier describes as 'the drift towards reductive functionalism' (Pelletier, in press). Rather, my exploration of various pathways through this new cultural domain aims to take account of the possibilities, as well as the losses, involved as we stand 'inescapably, at the threshold of a new and unsettling age in which we must reimagine the scholarly enterprise' (Stone, 1995: 177).

A brief summary of content

This introductory section is followed by my methodology chapter, which attempts to position my approach to the project of inquiry. I outline the theoretical and methodological perspectives which inform my thesis, and attempt to locate my work somewhere at the shifting interface of cultural studies and educational inquiry. In particular, I explore the terms by which its validity might be established in a theoretical setting which problematises the positivist tenets upon which the idea of doctoral research is founded. This chapter is followed by a coda in which I give short, descriptive accounts of the interviews I undertook with students and teachers while conducting this piece of research. My aim in doing this is partly to provide contextual information about who my interviewees were, but also to give a sense of the tone and mood of each interview, and to present my own perspective on the interview event.

The main content section of the thesis begins, in chapter three, by exploring the analogy between ways of being in cyberspace and the mythical story of the metamorphosis of Arachne. This tells the tale of the punishment of a mortal

woman whose skill in weaving exceeds that of her teacher, the goddess Athene. It is a story about the power relationship between a teacher and a student, about their respective mastery of a medium, about different, literally competing, ways of creating – or weaving – the world, about mutability, deceit, mutation and metamorphosis. It provides a mythical analogy that I draw on at several points throughout the thesis. In this first chapter, I use it as a way of thinking about the issue of identity formation in online learning environments, and about the contrasting ways in which learners and teachers approach the issue of their own identities in the cyberspace classroom.

In chapter four I turn to text and its changing forms, via the concept of a textuality that is 'written in water'. I consider the themes of stability and fluidity by looking at aspects of the relationship between digital text and printed text, incorporating a discussion of the effects of the new medium on modes of thought and of subjectivity. The chapter ends by looking at interview narratives which show that, in the contexts of online learning, students and tutors look to the printed page as something materially and metaphorically 'graspable', an apparently stable entity imbued with an authenticity which contrasts with the unsettling mutability of digital text. The coda to this chapter presents the transcript of part of a single interview in which a student describes an alternative conceptualisation of reading and learning from web text. This particular interview was unique in this sense, and I offer the relevant section in full here to provide a counter-voice to the expression of print-dependence which dominates the main body of the chapter.

Chapter five is a key chapter in that it explores some specific examples of pedagogies which attempt to engage with digital modes of textuality and subject formation. First, I assess three 'emergent' pedagogies in terms of their success as media-specific methods of working and of perceiving the academic task. Then, in the second half of the chapter, I turn my attention to pedagogical environments, considering the virtual learning environment in terms of Deleuze and Guattari's (Deleuze and Guattari, 1988) conceptualisation of smooth and

striated cultural space. This chapter has a coda which continues my discussion of virtual learning environments, by considering their implications for the exercise of disciplinary power through surveillance of student behaviour. In particular, I explore the impact of such surveillance on the formation of learner subjectivity.

In chapter six I return to textuality, this time to assess the changing definitions of authorship emerging through the new textual forms. I consider the challenge the new authorships present to the tradition of scholarship, and explore examples of the ways in which learners and teachers speak about issues of authority, legitimacy and trust within electronic, as opposed to print, text.

My seventh chapter turns toward embodiment – a key issue in contemporary discussion of cyberculture and internet identity. Here, I explore some of the philosophical and theoretical discussions which have taken place around the relation between mind and body, and I discuss the concept of the posthuman as a way of considering our increasingly intimate relation to the machinic. The implications of these concepts for learning and teaching are explored through a discussion of interviewees' accounts of their experiences in learning environments in which the body is rendered invisible.

In my final chapter, I offer some brief conclusions, and give a summary of my ideas for further research.

Chapter 2

Methodology

> The long journey we are embarking upon arises out of an awareness on our part that, at every point in our research – in our observing, our interpreting, our reporting, and everything else we do as researchers – we inject a host of assumptions. These are assumptions about human knowledge and assumptions about realities encountered in our human world. Such assumptions shape for us the meaning of research questions, the purposiveness of research methodologies, and the interpretability of research findings. Without unpacking these assumptions and clarifying them, no one (including ourselves) can really divine what our research has been or what it is now saying. (Crotty, 1998: 17)

Introduction

This chapter will outline the theoretical and methodological perspectives which inform my thesis. It will also outline the ways in which, while researching and writing it, I have tried to develop and clarify practical approaches to the project of inquiry which fit these perspectives. In general terms, my approach to inquiry into the interface of education and new technology takes place within the interdisciplinary space provided by cultural studies. Such an approach is at odds with what is often the general thrust of research into learning technology and with mainstream social science research itself. My project therefore has something of the 'methodological impurity' (Frow and Morris, 2000: 327) of the cultural studies approach – bearing the marks of more than one discipline, it incorporates abstract theorising with empirical inquiry and textual analysis of interviews. This chapter is my attempt to be explicit about how I have gone about negotiating the tensions resulting from this mix.[1]

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[1] If, in this chapter, there is more on the paradigmatic perspectives shaping social science than the practitioner of 'pure' cultural studies might see the need for, and perhaps less on formal method than might be looked for by the educational researcher, this is a negotiation I have had to make – as best I can – as a result of my interdisciplinary stance.

The first part of the chapter is theoretical, and concerned with paradigms in social science, and particularly educational, inquiry. In particular it considers its positivist inheritance and the moves away from this represented by postpositivism, constructivism and poststructuralism. In section one, I briefly outline the extant, if diluted, tenets of positivism as still practised throughout much mainstream social science and educational inquiry. In the second section I briefly summarise the shift into postpositivism, and touch on some of the other *isms* – constructivism, constructionism, interpretivism – in a way which helps me to locate my own study within the complex array of methodological and epistemological possibilities. A third section focuses on narrative analysis, an interpretivist approach to the study of interview texts that has influenced this project to a certain extent – I describe the territory I share with this approach and indicate where my path diverges from it. The fourth section considers the possibility of a poststructuralist, or postmodern, approach to inquiry and attempts to position my own study within it.

The second half of the chapter describes the particularities of my own approach to my research project. Seeing the PhD thesis as a form of training as a researcher has given me, in this section, the confidence to take an honest view of the ways in which my approaches to method have evolved over the course of my study. I do not perpetuate an objectivist myth by pretending that a singular, pre-planned method operated throughout my project from beginning to end. I outline my approach in three sections, relating to data generation, transcription and reading of interview data, and validity.

Part 1: Paradigmatic perspectives

If my research project had been purely within a humanistic disciplinary realm in which textuality is, explicitly, 'both method and matter' (Sundholm, 2002: 118), it would perhaps have been less necessary to engage in the epistemological questioning that seems to go alongside the project of contemporary social research. Social science has a history of making truth claims about knowable external realities achieved through the study of the experiences of individuals and groups, while concealing the nature of such truth claims as linguistically formed and constructed by the researcher. Choosing to focus at least part of my project on the generation of data in partnership with interviewees, and engaging in research which draws on the disciplines of educational inquiry and cultural studies, seems to involve an obligation to state my own position to the project of inquiry and confront my own epistemological assumptions.

Paradigm choices

A positivist inheritance

Many theorists of research method in the social sciences (Lincoln and Guba, 1985, Scheurich, 1997, Alvesson, 2002) see the area as continuing to be guided and dominated by 'the positivist posture' (Lincoln and Guba, 1985: 15). This broadly positivist approach shares with the logical positivism of traditional natural science research a focus on the quantitative, the knowable and the measurable. Hesse describes the assumptions of empirical science as involving several aspects:

> there is an external world which can in principle be exhaustively described in scientific language. The scientist, as both observer and language-user, can capture the external facts of the world in propositions that are true if they correspond to the facts and false if they do not. Science is ideally a linguistic system in which true propositions are in one-to-one relation to the facts... Man as scientist is regarded as standing apart from the world and able to experiment and theorize about it objectively and dispassionately. (Hesse, 1980: 20)

These, still-operating 'general parameters' of positivism – and their associated assumptions of 'naïve realism' (Mishler, 1991) – might cause the following to be taken for granted:

1. that valid and accurate representations of a knowable reality can be achieved relatively unproblematically, and that true knowledge functions as an accurate representation of a pre-existing world independent of the knower's experience of it

2. that research can in theory be value-free with the perspective of the researcher having minimal effect on what is observed, the discovery of 'the truth' being possible with a robust methodology which eliminates researcher 'bias'

3. that language and meaning are transparent to each other, language operating as a stable medium – a tool which can be used to mirror reality and represent its truth as 'discovered' by the researcher

4. that the researcher holds a position of autonomous subjectivity from which his or her reasoning mind can be applied to an external, observable world.

Postpositivism

Postpositivism, 'the new paradigm' operating in both the natural and the social sciences, emerged during the latter half of the last century. Though it has been claimed that 'its basic tenets are virtually the reverse of those that characterized positivism' (Lincoln and Guba, 1985: 29), its main challenge to positivist hegemony has been its reappraisal of the nature of 'knowable', researchable reality. In postpositivism, realities are multiple and constructed rather than single and knowable. Objective 'reality', if it exists, is unknowable to us – all we have are our own subjective constructions of it.

Following from this is the idea that the knower does not act on an external, knowable world, rather she herself works to co-construct her own version of the reality of her object of study through negotiation with those she is researching. While the postpositivist researcher might aim to make his study as 'objective' as possible, he would acknowledge that objectivity is no longer an achievable goal. Where positivism would see valid research as being value free, postpositivism acknowledges that all inquiry is value bound and that truth claims can only exist in a context-specific way. As Geertz points out, the positivist researcher's 'claim to moral neutrality and the Olympian view, the "God's truth" idea' (Geertz, 1983: 34) is no longer tenable.

In most of its forms, therefore, postpositivism challenges the first two positivist assumptions listed above – 1. the idea of a largely unproblematic, singular and knowable reality and 2. the clear division between the researcher and researched and the possibility of unbiased inquiry. The second two assumptions – 3. the transparency of language and 4. the autonomous subjectivity of the researcher – are largely left in place.

Constructivism – itself really a form of postpositivism – has many forms, but in broad terms it shares the critique of the positivist assumption of a knowable reality and of objectivist inquiry (Steier, 1991). It is likely to view quantitative method alone as an inadequate means of gaining insight into the ways meaning is constructed among social actors. Some of its practitioners, however, criticise much of postpositivism's continuing preoccupation with the ideal of scientific generalisability, and its dependence on systematic method (whether qualitative or quantitative) as a way of avoiding 'overly subjective interpretations' (Schofield Clark, 2002). As Gergen puts it:

> The sciences have been enchanted by the myth that the assiduous application of rigorous method will yield sound fact – as if empirical methodology were some form of meat grinder from which truth could be turned out like so many sausages. (Gergen, 1985: 267)

The postpositivist approaches being critiqued in this quote may hold that objectivity is not achievable, but still see it as a worthwhile goal towards which the researcher should be oriented, making the application of 'rigorous' (i.e. systematic and scientifically-informed) method the only way of conducting valid research. This kind of postpositivism looks purely toward scientific method as a way of validating the project of inquiry, where certain forms of constructivism might equally use methods drawn from the humanities.

However, like postpositivism generally, constructivism tends to neglect two issues central to post-structuralist approaches – language and subjectivity. Language is seen as a complex but generally stable and transparent tool for the representation of meaning, while the subjectivity of the researcher is tacitly assumed to be stable and autonomous. von Glaserfield, for example, coined the term 'Radical Constructivism' (von Glaserfield, 1974) to describe an epistemology which 'unequivocally gives up the notion that knowledge ought to be a veridical 'representation' of a world as it 'exists' prior to being experienced' (von Glaserfield, 1991: 16). For von Glaserfield, however, language is a relatively straightforward product of social interaction – it 'arises and becomes a relatively stable system through the continual interaction of the individuals that use it' (21). Likewise, the subject which 'does' the constructing of reality in this constructivist world is more or less Cartesian:

> Radical Constructivism claims…that perception and all forms of seeing, be they sensory or conceptual, are the result of operations that have to be carried out by an active subject. In this sense the acting subject is responsible for the experiential world it constructs. (27)

So while constructivism is radical in its disruption of the positivist relationship between knower and known, and between subject and object, it does not mount the challenge to foundationalism that poststructuralism does. The relation between the two is perhaps best defined by Scheurich:

> poststructuralism is thoroughly constructivist. However, it is a constructivism that explicitly and radically engages the foundational assumptions of modernity, which most constructivism does not do. (Scheurich, 1997: 4)

It is partly on the issues of language and subjectivity that constructivism parts company with constructionism, an alternative position with which it is often elided. As Gergen and Gergen point out, from the social constructionist perspective:

> it is not the cognitive processing of the single observer that absorbs the object into itself, but it is language that does so. (Gergen and Gergen, 1991: 78)

This idea of language being 'deeply constitutive of reality' (Riessman, 1993: 4) is something social constructionism shares with interpretivism as demonstrated in methodological approaches such as narrative analysis.

Narrative analysis: an interpretivist methodology

Although I have not consistently used her approach in the generation and interpretation of the interview texts presented in this thesis, I have found Riessman's work on a literary approach to narrative analysis (Riessman, 1993) and her exploration of an interpretivist methodology to be helpful in formulating my own approach to inquiry. Narrative analysis, like other interpretivist approaches, is characterised by a turn away from the positivist stimulus-response model of interviewing towards a focus on the operations of discourse (Labov and Waletzky, 1967, Labov, 1972, Labov, 1982, Mishler, 1986, Mishler, 1991, Mishler, 1992).

Where mainstream qualitative analysis aims to standardise questions and rigorously code and systematise data in an attempt to minimise ambiguity, narrative analysis is more likely to focus on the drawing out of the instabilities, pluralistic meanings and ambiguities which characterise discourse. Attention is paid to the historically and culturally specific nature of the narrative and to the

fact that it does not emanate purely from the experience of the teller, but is an authored product of the interview context – a linguistic co-construction of the interviewer and interviewee. Above all, narrative analysis is about 'how protagonists interpret things' (Bruner, 1990: 51) – the interviewee's interpretation of what has happened to them, and the researcher's interpretation of the resulting narrative.

The field of narrative analysis itself, 'inherently interdisciplinary' and influenced strongly by approaches to the study of texts developed in the humanities, is indicative of the 'interpretive turn' in the social sciences (Riessman, 1993: 1). Lather characterises this turn as involving a move 'away from cognitive, rule-based, behaviorally focused empirical work toward more reflexive, language-based, interpretive practices' (Lather, 1991: 166). Social science comes to be influenced less by natural science and more by 'imagery, method, theory, and style…drawn from the humanities', resulting in 'blurred genres' and a dramatic turnaround in academic ways of knowing (Geertz, 1983: 23). This turn towards the textual in its broadest sense is also a feature of the cultural studies approach (Frow and Morris, 2000: 328).

Though I am drawn to the literariness of the narrative analysis approach – to its focus not just on 'what a story says' but on *how* it says it – and to the way in which it highlights the discursive nature of the research interview and the texts it generates, there are several points at which my own perspective differs from that taken by Riessman. I will expand on these, since doing so also leads into an explication of the perspectives which inform my own analysis.

First, I am uncomfortable with the tendency within narrative analysis to essentialise the function of the personal narrative. Indeed it is this tendency which forms one of the bases of the narrative analysis approach – narrative is seen as a 'primary' means by which human beings organise and order experience and identity.

> A primary way individuals make sense of experience is by casting it in narrative form… Narrators create plots from disordered experience, give reality 'a unity that neither nature nor the past possesses so clearly. In so doing, we move well beyond nature into the intensely human realm of value' (Cronon, 1992: 1349). Precisely because they are essential meaning-making structures, narratives must be preserved, not fractured, by investigators, who must respect respondents' ways of constructing meaning and analyze how it is accomplished. (Riessman, 1993: 4)

The focus on narrative as opposed to other discursive forms generated in interview pre-supposes this perspective – that narrative is special, or specially revealing, in a deep and essential way which is not shared by other forms. In analysing my interview texts I have not found this to be the case – stretches of talk which are neither structurally nor affectively narratives can be as richly 'readable' as those extracts which fit into Labov's or Riessman's structural models. As Scheurich points out in his critique of Mishler, 'scholars of color, feminists, and postmodernists have made us very wary of promoting any kind of essentialization. What is often found is that such essentializing turns out to be the projections of a particular social group' (Scheurich, 1997: 68). While Riessman's readings are insightful and even inspirational, I cannot share her privileging of narrative over other discursive forms because I believe it is at base an essentialising move. In analysing my own interview texts I have tried to apply a similarly literary, sensitive and insightful reading eye beyond the formally structured narrative to all the discourse produced and recorded from the interview.

The Riessman quote above indicates a second aspect of her approach to personal narrative about which I have reservations. Despite her explicit acknowledgement of the discursive and constructed nature of the interview narrative and her expressed view that language is 'deeply constitutive of reality' (4), there is still an implicit assumption that narrative is drawn from a well of unmediated experience like water in a bucket, that narrators 'create plots from disordered experience' in order to give reality a 'unity'. In quoting Cronon's view that narrative creates a unity from the fragments of nature and the past,

Riessman subscribes to the idea that the function of narrative is to create order from disorder, that the narrator works on the raw material of past experience to create the polished diamond which is the narrative – the shiny, finished distillation of an experiential truth (Riessman does not claim that narrative reflects *the* truth). Rather than seeing narrative as a way of imposing order on 'nature and the past', I would prefer to see it as a way of constituting them, to see the narrative text as a way of constructing rather than ordering experience. I have found Belsey's perspective very helpful and revealing on the issue of how such texts relate to personal experience:

> I do not believe that we have access to other people's experience. I am not even sure that we have access to our own. But more important, experience, like sexuality, surely does not exist in the raw, in its natural state, outside the order of language and culture. Experience is lived as differential, and difference is the mark of the signifier. Experience inhabits the symbolic order, whether in a state of submission or resistance to it. That it also exceeds the symbolic does not justify a metaphysics of experience, investing experience with a presence anterior to signification. On the contrary, experience simply participates in the differance (with an *a*), the distancing and the displacement, which is the condition of all signifying practice. Its presence, similarly, is an illusion.
>
> To deal in texts, then, is to come clean about difference. It is to surrender the authority of experience (which is not, after all, open to discussion), and to stage the debate in the arena of textuality, which is available to anyone. (Belsey, 1994: 10)

Ultimately, I see narrative analysis as practised by Riessman as being encompassed by the 'metaphysics of experience' which Belsey warns against. In a sense, the language of research is itself encompassed by such a metaphysics in that all the words which it is most tempting to use in describing interview texts – *insightful*, *revealing*, *illuminating*, *disclosing*, *clarifying, expressive* – carry within them the assumption that a pre-existing experiential reality is being uncovered, looked into or directly expressed. As Hazelrigg points out, the metaphors we use in describing inquiry bring with them political implications. To choose metaphors of discovery over those of construction, to use the

language of a 'discovered world', is to assume a certain 'passivity in regard to responsibility for the world' (Hazelrigg, 1989: 168).

Belsey's perspective, as expressed in the above quote, is explicitly poststructuralist, or deconstructive. The orientation of my own analysis to poststructuralism will be considered in more detail below, but I would like to note here that in working with my interview texts I have tried to avoid making casual links between the discursive constructs of interviewees and the lived reality of their experience – in short I have tried to 'stage the debate in the arena of textuality'. I also try throughout to employ metaphors of making or construction over those of discovery.

There is a further point at which my approach differs from narrative analysis as described by Riessman and others. My critique of the passage from *Narrative Analysis* given above includes a third issue – the consideration of Riessman's approach to the unity of the text:

> Precisely because they are essential meaning-making structures, narratives must be preserved, not fractured, by investigators, who must respect respondents' ways of constructing meaning and analyze how it is accomplished. (Riessman, 1993: 4)

While I agree that it is important to respect interviewee's ways of constructing meaning, and share to an extent the critique of approaches which 'clean up' and decontextualise interview fragments in order to prop up emerging theory, I think that there is a fundamental contradiction at work in the way Riessman's narrative analysis privileges the hermeneutic wholeness and unity of the *narrative* text while highlighting the nature of the *research* text as 'incomplete, partial and selective' (Riessman, 1993: 11). I see the research project as being a meaning-making endeavour in much the same way that a narrative is – to take a holistic view of the one while acknowledging the fragmented nature of the other is as contradictory as attempting to divide up a cake while keeping it whole.

Narrative analysis is at base a structuralist approach which essentialises the function of personal narrative and implicitly assumes a stable and knowable, or at least interpretable, relation between narrative and experience – the idea of the structural unity of the narrative text is essential to this method. In terms of my own method, I prefer in my readings of interview texts to be free also to deal in fragments. I think it is possible to do this without reducing them to decontextualised monads, to work with the interview text as something 'incomplete, partial and selective' but still richly suggestive, an entity with all its parts functioning as meaning-making events open to sensitive reading.

Where narrative analysis tends toward a hermeneutic focus on the unity of the structural narrative, my own readings are more likely to highlight the tensions and ambiguities inherent in the interview text. This is a deconstructive move which I think more accurately represents the problematic nature not only of the relation between interviewees and learning technology, but also of the relation between interviewee and researcher. It also encompasses the problematic nature of the project of inquiry itself. This is perhaps the dominant theme in the postmodernist explorations of research method which I will turn to next.

Postmodernity and social research

Humility in the pursuit of knowledge

Anyone currently seeking to make an 'original contribution to knowledge' must deal with the issue of what it means to conduct research after poststructuralism has problematised, or rather turned on its head, every positivist tenet upon which social science, and indeed the idea of doctoral research, was founded. If we are living in postfoundational times, what does it mean to engage in inquiry, to know? If both research subject and researching subject are discursively produced, fluctuating entities, truths at best contingent and knowledge a function of power, of what might an 'original contribution' consist?

Social research emerged in and from a world in which objectivity could be achieved through rigorous method, knowledge being described in language which was a direct and transparent means of representing findings proven to be true by a knowing, observing and autonomous expert-researcher. Now it must get along as best it can in a world where knowledge is the flipside of power, research is an exercise in meaning making inscribed in a language which slips away with itself without hope of ever finding its referent, conducted by researcher-subjects who are fragmented, multiple and constituted by the very discourses they once saw themselves as masters of.

Alvesson, for example, acknowledges that postmodernity might be seen as a perspective 'that problematizes everything that social research tries to accomplish' (Alvesson, 2002: 2), while Lather (1991) sees the clash of positivism and poststructuralism as opening up the space of educational inquiry to conflict and contestation:

> unsettlement and contestation permeate discussion of what it means to do educational inquiry… In sum, while positivism retains its dominance over inquiry practices in education, it has lost its theoretic foundation: the objective, the apolitical and the value neutral upon which rested its claims to scientific authority.
>
> As the concept of 'disinterested knowledge' implodes, educational inquiry becomes…a much contested cultural space, a site of the surfacing of what it has historically repressed. (Lather, 1991: 55-156)

Along with the dismay, postmodernism and poststructuralism appear also to have introduced a certain humility among practitioners of social research. For Scheurich, for example, commenting on the possibility of validity in social research, the awareness of the arrogance of claiming to know is almost paralysing:

> I am deeply troubled by the anonymous imperial violence that slips quietly and invisibly into our (my) best intentions and practices and, even, into our (my) transformational yearnings. I fear our restless civilizational immodesty; I fear the arrogance we enact

> 'unknowingly'; I fear my seeming lack of fear in proposing new imaginaries of validity, even transgressive ones. Perhaps, instead, we (I) ought to be stunned into silence. (Scheurich, 1997: 90)

Alvesson, more pragmatic, cautions against hubris in methodological practice:

> It is possible that careful methodological reflection on what interviews (and other practices) can do might limit our hubris and encourage the use of empirical material for inspiration or illustrative purposes or as an ambiguous corrective (counterpoint) to bad ideas, rather than as a robust basis for the determination of the truth or development of (grounded) theory. (Alvesson, 2002: 123)

For these commentators, the contemporary state of knowing has given rise to a troubled challenging of the arrogance of making truth claims. Richardson, in considering postmodern approaches to the writing of social research, has a more affirming though equally humble response:

> Postmodernism identifies unspecified assumptions that hinder us in our search for understanding 'truly', and it offers different practices that work. We feel its 'truth' – its moral, intellectual, aesthetic, emotional, intuitive, embodied pull. Each researcher is likely to respond to that pull differently, which should lead to writing that is more diverse, more author centred, less boring, and humbler. These are propitious times. Some even speak of their work as spiritual. (Richardson, 2000a: 939)

Defining terms

There is not space in this chapter to provide a comprehensive description and critique of the impact of postmodernism and poststructuralism on social science research. Rather my aim is to focus in on the way in which an orientation toward postmodernity might feed into methodological practice, and how it has done so in my own case. Postmodernism is notoriously difficult to pin down and it is not easy to make concrete methodological decisions based on its tenets, but I have tried to be as clear as I can in setting out how my methods are informed by, and where they part company from, the practices of others conducting research influenced by postmodernist and poststructuralist thought.

First, perhaps I should define what I mean by *postmodern*, a term which has been overused, abused and contested to the degree that it tends now always to be introduced with the kind of apologetic qualification I am myself about to make. With Poster, I recognise 'the need for a deployment of the term *postmodern* in a manner that makes it suitable for analysis without either a celebratory fanfare or sarcastic smirk' (Poster, 2001a: 10). Poster draws our attention to the universalising tendency of the term:

> Since the category of the subject was discursively inscribed as universal, even though it betrayed its conditions of birth in white, Western male culture, the suggestion that it has collapsed incorporated the same universalist gesture. (10)

Poster's response is to define and use the term very specifically as a way of describing the role of new media in the processes of self-constitution. My use in this chapter is a little more general, though I keep it specific to the issue of its implications for methods of inquiry. I use *postmodernism* as a term which incorporates the challenges to foundationalism in social research mounted by postpositivism and constructivism, but which in addition includes a critique of the two positivist assumptions outlined on page 21 which these leave largely unchallenged – 3. the transparency of the language in which research 'findings' are 'conveyed' and 4. the autonomous subjectivity of the researcher.

So how might the big postmodern themes – the centrality of discourse, the fragmentation of identity, the crisis of representation, the loss of the metanarrative and the power-knowledge connection – feed into social research inquiry? What are the 'different practices that work' referred to by Richardson? Lather (1991) notes three shifts taking place in the 'small body of literature that has begun to address postmodernism and the human sciences'. These shifts are in line with what might be described as a cultural studies approach:

1. a shift from emphasis on general theorising to problems of interpretation and description of social reality

2. a deconstructive emphasis on writing, a focus on the textual staging of knowledge
3. a focus on the social relations of the research act itself. (Lather, 1991: 156)

I would like to follow Lather and use these three shifts as a way of structuring my discussion of the possibility of a postmodern approach to inquiry.

From general theorising to problems of description and interpretation

The 'linguistic turn' (Alvesson, 2002: 65) involved in postmodern approaches to social research brings with it the idea that it is through textuality that we know about the world. In my critique of Riessman's narrative analysis I have already touched on the problematic issue of the relationship between an interview text and the interviewee's experience, and the danger of being drawn in by what Belsey calls the 'metaphysics of experience' (Belsey, 1994). Giving up on the idea that it is possible to work with direct representations of individuals' experiential reality and instead 'staging the debate in the arena of textuality' involves, among other things, a turning away from the possibility of the construction of big truth-claims and meta-theories towards an exploration of the local, the small-scale, the micro-truths revealed in the readings of texts. As well as putting the researcher in a more honest position towards knowledge, such an approach in a sense liberates inquiry. As Richardson points out, it:

> does allow us to know 'something' without claiming to know everything. Having a partial, local, historical knowledge is still knowing. In some ways, 'knowing' is easier, however, because postmodernism recognizes the situational limitations of the knower. Qualitative writers are off the hook, so to speak. They don't have to try to play God, writing as disembodied omniscient narrators claiming universal, atemporal general knowledge; they can eschew the questionable metanarrative of scientific objectivity and still have plenty to say as situated speakers, subjectivities engaged in knowing/telling about the world as they perceive it. (Richardson, 2000a: 928)

The focus on writing and the textual staging of knowledge

Postmodern approaches to social research are characterised by a shift in focus away from the 'field' towards the text. For some, the research text *is* the field (Clifford and Marcus, 1986, Geertz, 1988, van Maanen, 1988). The research report is no longer seen as the more or less transparent means by which the truths discovered in the process of the project (its 'findings') are conveyed, rather the writing of the report is itself seen as a method of inquiry (Richardson, 2000a). Writing a research report shifts from being an act of truth-telling to being an act of meaning-making. The research text no longer describes – it inscribes (Tyler, 1985), its 'form and content are inseparable' (Richardson, 2000a: 923).

The narrative realism of the conventional research text therefore comes to be viewed with distrust, due to its tendency to 'use language so that it gives the appearance of clear, referential meaning…to conceal the artifice that produces the appearance of objectivity' (Lather, 1991: 157). An openness to alternative textual strategies for the writing of research is therefore characteristic of postmodern approaches – to experiment with modes of writing which allow multivocality, multiple interpretation, partial insights and subjective readings to take the place of the univocal, truth-claiming, all-knowing authorial voice of the traditional research text. True to the genre-blurring movement outlined by Geertz (Geertz, 1983), there is a distinctive turn toward the literary:

> Increasingly ethnographers desire to write ethnography which is both scientific – in the sense of being true to a world known through the empirical senses – and literary – in the sense of expressing what one has learned through evocative writing techniques and form. (Richardson, 2000b: 253)

The result is a range of textual strategies designed to foreground the rhetorical nature of research writing and the constructedness of the research text. Mulkay, for example, creates a text which incorporates an introductory dialogue between Author, Book and Reader, epistolary exchanges among academics, Nobel ceremony official records, and a play (Mulkay, 1985). The result is a 'quasi-

fictional text' which 'allows more than one voice, and more than one interpretative stance, into the analytical text on an equal footing' (5). The aim is to highlight the idea that all forms of sociological discourse are 'imaginative reconstructions of our world in so far as that world is mediated through our own and other's interpretative work' (11).

Richardson describes a variety of other textual strategies, which she groups under the term 'CAP (creative analytic practice) methodology' (Richardson, 2000a: 929). These include autoethnography (Bruner, 1996, McMahon, 1996, Yu, 1997), fiction-stories (Richardson and Lockridge, 1991, Diversi, 1998, Rinehart, 1998), performance texts (Denzin, 1997, Richardson, 1999), polyvocal texts (Pandolfo, 1997, Daly and Dienhart, 1998), readers' theatre (Donmoyer and Yennie-Donmoyer, 1995), comedy and satire (Barley, 1986), visual presentations (McCall et al., 1994), conversation (Richardson and Lockridge, 1998), layered accounts (Jago, 1996) and hypertexts.

Alongside the concern with polyvocality, perhaps the most important theme emerging from these experimental forms is their preoccupation with reflexivity. Coming out of the desire to minimise the 'violence' implicit in the process of constituting the human as knowable object, self reflexivity has been called 'the new canon' in postmodern social research (Rajchman, 1985, quoted in Lather (1991): 163), though it is also key in constructionist (Steier, 1991: 2) and feminist (Stanley, 1990, Henwood et al., 2001) approaches. In the postmodern, it often consists in researchers adopting writing strategies in which they very self-consciously situate themselves in relation to their object of study and to the project of inquiry itself (Richardson, 2000a).

I see reflexivity and the situating of the researching-writing subject in a particular social, historical and cultural context as being essential. I do feel, however, that some of these approaches tend toward the solipsistic (for example Day, 2002). While it is true that in a sense all research writing is autobiographical, as one writer puts it, 'It is not that the writing is not *by* me, but

it is not *about* me' (Moules, 2002). I think that there is a balance to be found between a commitment to reflexivity and the tendency to become self indulgent. Too much of a focus on the constitution of the researcher's subjectivity can end up re-situating the author at the centre of the research text – the very move that researchers working within a postmodern framework have an interest in undermining.

My own approach to the writing of reflexivity is to include in the coda to this chapter a passage in which I very briefly situate myself autobiographically in relation to my project, in order to hint at the 'interpretive baggage' (Scheurich, 1997: 74) I bring to it. This coda also contains a brief construction of the story of each interview encounter in an attempt not to decontextualise my interview texts and to be as honest as I can about my own preconceptions and preoccupations while conducting the interviews. In addition I adopt various, generally low-key strategies to make my own presence throughout the research text explicit – these include leaving my own interventions in transcriptions of interview passages, writing in the first person, and being conscious throughout of a tendency to attempt my own erasure through employing the rhetoric of academic objectivity.

Alongside the concern with reflexivity, postmodern research method has a tendency to concern itself with the blurring of the boundary between fact and fiction in the research text. Clifford draws our attention to the arbitrariness of the way in which scientific discourse de-legitimates certain expressive forms. Rhetoric, subjectivity and fiction have since the 19th century been aligned with literature, with the values of 'taste, aesthetics, ethics, humanity, and morality', while science took for itself the terms and forms of precision, objectivity and fact (Clifford and Marcus, 1986: 5):

> The maker (but why only one?) of ethnographic texts cannot avoid expressive tropes, figures and allegories that select or impose meaning as they translate it. In this view, more Nietzchean than realist or hermeneutic, all constructed truths are made possible by powerful 'lies' of exclusion and rhetoric. Even the best ethnographic

> texts – serious, true fictions – are systems, or economies of truth. Power and history work through them, in ways their authors cannot fully control. (Clifford and Marcus, 1986: 7)

The fictive strategies undertaken by some postmodernist researcher-writers represent an attempt to re-engage with the forms science has traditionally excluded. The discrediting of objectivism and positivism in social research opens the doors to a range of approaches designed to highlight the 'fictional' nature of the research which has historically been constructed as pure 'fact'. One example would be 'ethnographic fiction' (Watson, 2000), in which:

> all the elements of a narrative providing the empirical material are based on the experiences and perceptions of the ethnographer, but their arrangement into a particular story is an effect of his or her literary arrangements… The study is empirically based, but not in any strict way, and the researcher applies few restrictions in writing up the text. (Alvesson, 2002: 74)

The de-privileging of scientific discourse leaves open the possibility for serious social research to take so-called 'creative' forms. As Elliot Eisner asks, why shouldn't a novel be accepted as a PhD dissertation in education? (Eisner, 1996).

While I agree that the research text is in many ways fictional, and while I am heartened by an approach which legitimates more creative and interesting ways of writing research, I do not employ explicitly fictive strategies in the writing of this thesis. Mainly this is because, while I do not believe that a doctoral thesis is necessarily a 'truer' act of meaning-making than a novel, I acknowledge that I wish to be constituted as a successful doctoral student rather than as a novelist. Partly, it is also because of the claims I am making for the text – I broadly agree with Richardson when she points out that:

> there is still one major difference separating fiction from science writing. The difference is not whether the text *really* is a fiction or nonfiction, but the claim the author makes for the text. Claiming to write 'fiction' is different from claiming to write 'science' in terms of the audience one seeks, the impact one might have on different

> publics, and how one expects 'truth claims' to be evaluated. These differences should not be overlooked or minimized. (Richardson, 2000a: 926)

While I do not necessarily share the intentionalism implicit in this quote, I do expect this thesis to be read and evaluated as a research document rather than as a piece of fiction, unless it is the 'serious, true fiction' referred to by Clifford (1986). My claim for the text is that it is a research document which constructs contingent truths about online learning cultures based, at least partially, on empirical data in the form of interview texts.

To conclude, the postmodern preoccupation with the writing of research introduces – alongside the focus on the constructedness of the research text – a re-legitimation of the creative, subjective, even passionate elements excluded from mainstream research writing. For the reasons outlined above, I have not attempted to develop any particularly self-consciously innovatory textual strategies in the writing of this thesis – the style in which it is written is primarily a realist one. I do attempt to vary this style to some extent, by including codas after many of the chapters. These present interview extracts, shorter analyses and, in the case of the coda to this chapter, fragments written in a naturalistic style. My aim is to provide some – hopefully meaningful – variation to the formal exposition which makes up the main body of the thesis. I do, also, approach the writing of the thesis with intentions that are both creative and reflexive. I make use of images where I feel they add meaningful texture to my argument, and do not shy away from employing allegory, metaphor, biography and other literary devices. I also acknowledge here the 'powerful "lies" of exclusion and rhetoric' (Clifford and Marcus, 1986: 7) being brought to bear in its construction.

The focus on the social relations of the research act

The interest among postmodernist and poststructuralist researchers in the social contexts of inquiry is summarised by Lather:

> All [research] methods have a political moment which at a fundamental level expresses a relationship between people. Social relations mediate the construction of knowledge; who speaks for whom becomes a central question. (Lather, 1991: 157)

Thus, central to much postmodernist and cultural studies based method is a consideration of the relationship between researcher and researched – the ways in which power is inscribed in the relationship and the issue of how the voices both of researcher and researched are articulated and represented in the text. There is also a focus on the power relations existing between the researcher and the reader of the research text.

At a fundamental level, many researchers in the postmodern 'tradition' take from Foucault the tenet that power is inextricably linked with knowledge. Research, as a knowledge-generating exercise, is itself a function of power – it is power which puts into circulation apparatuses of knowledge which create sites where knowledge is formed (Foucault, 1979). Power in this scheme is not the possession of an individual or a group, rather it is the means by which individuality itself is constituted:

> one of the prime effects of power is that certain bodies, certain gestures, certain discourses, certain desires come to be identified and constituted as individuals (Foucault, 1979: 5)

In this categorisation and identification of the individual, humans are constructed as objects of knowledge. For Foucault such individualisation, taking place throughout the social sphere, created the conditions by which the human or social sciences have been able to emerge and prosper. In other words, the exercise of power is the very condition of knowledge in social science. In turn, the human and social sciences work to enhance and refine technologies of power in 'a relationship of mutual reinforcement' (Smart, 1985: 105). The symbiotic nature of the relationship between knowledge and power means that no act of research can be placed outside the power-knowledge loop.

The concern with knowledge-power and the politics of domination is central to those engaging in feminist and critical inquiry. While the emancipatory agenda inherent to these approaches could not be described as 'strictly' postmodern, feminists and critical theorists have used postmodern or deconstructive practices in order to disrupt dominant discourses and explore ways of researching and writing which do not deny what is multiple, constructed, partial and contingent in ways of knowing (Ellsworth, 1989, Lather, 1991, Lather, 1993, Blair and Takayoshi, 1999).

Power is also key in Mishler's postpositivist-interpretivist approach to research interviews (Mishler, 1986). Mishler's view here is that in mainstream, positivist research, there is an extreme imbalance in the power relationship between researcher and researched, between interviewer and interviewee. The researcher sets the terms in which the interview is conducted, devises the questions, judges the adequacy of the responses and finally, through analysis, defines their 'meaning'. The interviewee in this scheme is the observed, the judged, the disempowered – the 'subject' (122). Key to Mishler's alternative approach is the attempt 'to find ways to empower respondents so that they have more control of the processes through which their words are given meaning' (117).

While it is true that positivist conceptions of interviewing are marked by a disregard of the issue of power, and by inequalities in its distribution, I agree with Scheurich's (1997) objection that there is a paternalism implicit in Mishler's approach, in that it assumes that power belongs to the interviewer-researcher who has it in them to somehow hand it over or grant it to the subordinate interviewee. Scheurich sees this as a 'totalization, a seamless encapsulation of researcher and interviewee in what Hegel characterized as the Master-Slave relationship' (70). While the response of critical theorists to this kind of power inequality has been to emphasise the creative ways in which the disempowered actively *resist* domination (Apple, 1982, Giroux, 1983, Weiler, 1988), Scheurich attempts a deconstructive de-stabilisation of the equally

totalising power-resistance binary by introducing a third space or term which he calls 'chaos/freedom'.

> chaos/freedom is everything that occurs that is neither dominance nor resistance; everything that escapes or exceeds this binary is chaos (because it is not encapsulated by the binary) and an openness or freedom for the interviewer and interviewee. (Scheurich, 1997: 72)

His point appears to be not that dominance and resistance do not exist in the interview context but that 'there is more to living, working, and interviewing than can be circumscribed by the dominance-resistance binary' (72).

I would agree with this in the sense that there were elements in all my interviews which were not about domination or resistance to domination – moments of accord, mutual incomprehension, laughter, tea drinking. Despite this, there was a complex interplay of power relations. My sense of these, however, was not one either of holding or of giving up power, nor particularly of wielding power in the face of active resistance. Rather power circulated in the interviews much as Foucault describes it as circulating throughout the social sphere, almost as a form of energy. At times – particularly when an interview took place in the interviewee's personal space, or when the interviewee was senior to me in age and academic position – the model of 'empowered researcher' and 'resisting subject' seemed particularly off-beam. (The mechanics of my interviews are more fully discussed in the Methods section following.)

Perhaps the primary locus for the wielding of power by the researcher is in the transcription, interpretation and writing up of interview data where, traditionally, the messy, open oral text is 'tamed' and closed off by the researcher as she imposes her analysis and voice upon it, in order to construct the seamless argument demanded by mainstream standards of validity. Postmodern approaches to the writing up of the interview text, with their emphasis on openness, multiplicity of interpretation and rejection of objectivism

attempt to work against this by allowing, or even forcing, the *reader* of the research text to actively engage with it as a partner in the construction of its meaning.

Another strategy – though not particularly a postmodern one – undertaken by some to subvert the tendency for the researcher's voice to be dominant, is to return their analysis of the interview text to the interviewee for approval and amendment ('member checks') (Lincoln and Guba, 1985, Smith, 1991), or even to invite the interviewee to co-author the research text (Johnston, 1990, Behar, 1993). I respect the rigour and political commitment of such approaches but have not adopted them, partly because – although I am interested in and deal at some length with issues of hierarchy and power – my project does not clearly revolve around emancipatory issues, being informed rather than defined by critical and feminist discourses. Largely, however, it is because I do not share the intentionalist agenda implicit in such approaches – I do not see the final meaning of the text generated in interview as residing in the intentions of the interviewee, any more than I see it as residing in my own analysis of it. I offer my interpretation of interviewee's stories as subjective, partial and culturally situated and do not make permanent truth claims based upon them.

Within the constraints involved in writing a text which aims to offer discussion sufficiently convincing to qualify for a PhD, my own approach to the issue of the relationship between reader and research text has been to allow an openness in the text which aims to draw the reader into participation in its interpretation. The thesis is written largely in the subjective mode and attempts to provide suggestive and reflexive insights rather than totalising, closed arguments. My approach to the issue of the power relations between researcher and interviewee has been not to attempt to 'speak' for them, nor to 'clean up' the oral text in a way which strips it of complexity and uncertainty, but to adopt a style of transcription which allows – as far as possible – the distinctive individual voice of each speaker to be heard, and a style of interpretation which, again, is

explicitly subjective and reflexive. The strategies I have used to achieve this are further explained in the Methods section below.

My theoretical approach: a summary

To summarise then, the theoretical approach I bring to this study is one drawn largely from postmodernist and poststructuralist approaches to the project of inquiry. Though influenced by interpretivism it is not preoccupied with the revelation of textual unity and does not consider the discursive constructs (the interview texts) it deals with to be directly revealing of a pre-existing experiential reality. In answer to the question, 'Why use interviews if – due to the constraints of language, interview contexts and the nature of subjectivity itself – they do not reveal experiential reality?', I would say that the particular discursive views on social reality constructed in my interviews provided valuable glimpses of what it means to learn and teach in cyberspace. To paraphrase Richardson (2000: 928) interview data cannot be used to say everything, but this does not mean that it cannot say *something* which is useful and valid.

Such an approach is not at odds with the hermeneutic project as defined by Caputo. For him, the function of a 'radical' hermeneutics is to 'restore the difficulty of things' (Caputo, 1987: 6). In bringing together deconstruction and hermeneutics, he conceptualises an approach which 'exposes us to the ruptures and gaps, let us say, the textuality and difference, which inhabits everything we think, and do, and hope for' (6). My textual analyses of interviews therefore aim to highlight their constructed, creative, authored and rhetorical nature, to explore their tensions and to create with them a research text which is itself acknowledged as constructed, creative, authored and rhetorical.

In my use of interview data, I try not to privilege it above other elements of the research project – the generation of theoretical ideas and the processes of

writing – but rather to see it as a means by which ideas and writing processes can be enlivened or, as Lather puts it, *vivified*:

> Data might be better conceived as the material for telling a story where the challenge becomes to generate a polyvalent data base that is used to *vivify* interpretation as opposed to 'support' or 'prove'. (Lather, 1991: 157)

I attempt a research methodology which – in line with the cultural studies tradition – acknowledges and works creatively with the idea that the truths constructed in the research process are partial and contingent, and that research and researcher are socially, culturally and historically situated.

I am aware that I have in this chapter charted a course through social research paradigms which appears progressive, moving from positivism through postpositivism, constructivism to poststructuralism as though they bore a simple sequential relation to each other. This is far more a reflection of my own changing approach to the project of inquiry than it is a reflection of a historical development. An important part of the research process for me has been the shift in my own perception of what it means to do and write research, particularly research which works with ethnographic data in the form of interview texts.

My assumption in starting this project was to view interviews naïvely, simply as a way of 'getting out there and finding out what the natives are up to' (Alvesson, 2002: 4). As I hope this first section of the chapter has made clear, my position has shifted dramatically. It is now one in which I am more aware of the ways in which theoretical perspectives and epistemological assumptions impinge in every way on my methodology, my attitudes towards my empirical data and my approaches to writing my research. This seems obvious only in retrospect. The first half of this chapter – long as it is – has charted this journey of shifting perceptions. The second half – shorter – deals largely with the mechanics of the research process as I have undertaken it.

Part 2: Methods

Introduction

It was T. S. Eliot's claim that, 'there is no method but to be very intelligent' (Eliot, 1975). For some poststructuralist researcher-writers also, method is finished (Lee and Poynton, 2000). It is seen as an approach to inquiry which – with its implications of the systematicity and neutrality of logical empiricism – suppresses the inscribed and inscribing nature of the research process:

> the proper way of proceeding is to make a move, not to follow a method, not to aim at fixed systematicity, but to explore different ways of proceeding. (Sundholm, 2002: 115)

While acknowledging that it is a problematic term, I would like still to use the word *method* to describe how I went about generating, transcribing and reading my data. My 'moves' also involved mechanics – to be explicit about these is to situate my study, to acknowledge that the discursive constructs generated in the interviews I undertook were the result of particular practical choices. What is most helpful about the problematising of method hinted at by Sundholm, is that the shift it describes away from 'fixed systematicity' towards 'exploration' leaves me freer to be honest about the ways in which my methods, particularly of generating data, have changed over the course of the research project. As I pointed out at the beginning of this chapter, it seems pointless to pander to objectivism by constructing here a version of my project in which methodology and method were signed and sealed in year one, results achieved and analysed in year two, and 'findings' 'written up' in year three, as though the whole project had been a positivist one of systematic truth-discovery. A more constructive and honest approach would be to use this section reflexively, as a way of explaining how my methods evolved throughout the project to a stage at which they are generating valuable and interesting insights into the cultures of education in cyberspace.

Data generation

This section will consider the ways in which I went about generating – or co-constructing – data in my research interviews. As I hope the previous section has made clear, my approach to the research interview was not to see it as a way of rendering accessible the 'inner worlds' of interviewees, but rather to see it as a way of generating interpretable texts via a 'point of intersection between two subjectivities' (Patai, 1988: 146) – that of myself and the interviewee.

Interviewees

The single criterion for my 'sample' was that each individual must have been involved – as teacher, learner, developer or all three – in some kind of formal learning programme in higher education which was delivered wholly or in part through learning technologies. Within this constraint, my approach was what Miles and Huberman would call 'opportunistic' (Miles and Huberman, 1994: 28), in that I took advantage of the leads offered to me by existing contacts to identify willing individuals and arrange for them to take part. The goal of 'representativeness' would have been inappropriate to this type of study – one which does not engage in the kind of truth claims implied in such an ideal – though I did aim to select individuals likely to take up varying discursive positions, and to give varying representations of their experiences online. By ensuring interviewees were drawn from programmes which varied in level, mode of delivery and institution I achieved a wide range in terms of age and social and cultural background.

I spoke to 25 volunteers. In a previous draft of this chapter I had at this point a table breaking down this figure into numbers of males and numbers of females, with a preliminary classification of roles as learner, teacher, teacher-developer, teacher-administrator and so on. In the end I felt uncomfortable with this kind of tabular classification in that it seemed to leave out all that was most interesting and engaging about the people I spoke to and the stories they told. The tempting neatness of such classification imposed upon them a fixity regarding subject

position and – even – gender role which was inappropriate, particularly given that my discussion with them was often focused on the way such distinctions became looser in online contexts. As an alternative, I have chosen to provide 'thicker' description (Geertz, 1973, Denzin, 1989) of my interviewees and the interview contexts in the coda to this chapter. This gives, I think, a richer account of who they were and the perspectives from which their accounts were generated.

The number of interviews I undertook – 25 – I consider to be sufficient for the kind of approach to textual analysis which I am undertaking in this study. In the initial stages of this project I was working with a tacit understanding of the nature and function of the interview procedure which, on reflection, was largely inherited from a grounded theory approach. It is usual in grounded theory to speak to between 20 and 30 individuals (Cresswell, 1998: 112) in the attempt to inductively develop theory with firm roots in the data collected (Crotty, 1998: 78). Narrative analysis, by contrast, attempts a similarly inductive approach but is likely to achieve it through the 'in-depth' reading of far fewer accounts. Riessman, for example, examines in detail the talk of only six members of her sample (Riessman, 1990, Riessman, 1993: 43) though she spoke to 105 in total. I stopped seeking out and conducting interviews when I felt that I had sufficient variety and richness of accounts to meet the requirements of this study. This is not to say I achieved what practitioners of grounded theory approaches call 'saturation' (Strauss and Corbin, 1990) in which data continues to be sought 'until no more can be found' (Cresswell, 1998: 56). Saturation seeks a finitude incompatible with the boundarilessness of discursive interpretation as I see it.

Means of accessing volunteers

The majority of people I spoke to were drawn from three programmes delivered by three separate Scottish institutions of higher education:

1. One group either were or had been engaged on a level one Cultural Studies module delivered on-campus to large numbers of undergraduates, using the conferencing software FirstClass in addition to face to face lectures.

2. The second were a much smaller group involved in a part-time Masters-level module in Marketing, delivered largely through the virtual learning environment software WebCT, with occasional face to face seminar sessions.

3. The third group were also engaged in a part-time Masters degree, using WebCT across a range of modules – the students I spoke to were currently studying one on Infection Control. This third programme was a 'pure' distance one, with only annual, optional face to face contact.

Only four of my interviewees were not drawn from one of these three groups. These four – drawn from three institutions – were learning and teaching professionals engaged in online learning from a development perspective.

With each of these three groups, my method for accessing individuals was first to make contact with course leaders. In the case of the first two programmes these were existing contacts. For the third, an existing contact gave me the name of the course leader who I then pursued via email. Through course leaders I arranged to attend face to face sessions at which I spoke to students and requested volunteers for interview. Students volunteered by signing a sheet – these contacts I followed up via email. In the case of the third group, which did not have face to face sessions, I sought and followed up student contacts wholly by email.

Interview format

I conducted all my interviews one to one and face to face. Locations varied, as detailed in the coda. I recorded each interview on tape and later transcribed them myself in full. Each lasted between 45 minutes and 2 hours. In total, the interviews generated around 400 pages of transcript.

The format of the interviews shifted as I reflected more on their nature and purpose, and became more experienced in conducting them. I started out with a tacit, vaguely-held assumption that interviews ought to adhere to something like the positivist stimulus-response model described by Brenner:

> Attempts to implement the stimulus-response analogy, in as much as possible, require, first the standardization of the questionnaire to be used in the interviews. In order to maximize the effect of the questions qua stimuli, it is also necessary to try to ensure that the interviewing techniques used do not affect the answering process other than in terms of facilitating the accomplishment of, in measurement terms, adequate responses – that is, answers which are contingent upon the questions alone. . . Also, in order to achieve reliability and precision in the ways in which interviews are conducted (both are prerequisites for assuming the equivalence of interviews in terms of interviewer-respondent interaction) the interviewing techniques must be determined, and standardized, before the data collection commences. (Brenner, 1982: 131-132)

I rapidly, however, became aware of the inadequacies involved in any attempt to apply the procedures of the experimental laboratory to the research interview. Within such a model, the interviewer operates under erasure, while the social and cultural contexts informing interviewees' responses are stripped away. That interviews are discursive exchanges replete with ambiguities, uncertainties, negotiations of meaning – engagements which are culturally situated and undertaken by subjects speaking from multiple positions and with multiple and often competing agendas – is ignored. That the interpretation or 'analysis' of such data is similarly situated is also not considered.

From the tacit assumption that the stimulus-response model was the correct approach to research interviewing, my perspective therefore very rapidly shifted to one which took on board the incommensurability inherent in any discursive exchange. The alteration in the way the interviews were structured as I became more experienced reflected this shift.

My interview schedule started with the list of 55 questions shown in appendix a. The initial two or three interviews I conducted using this schedule generated a lot of data, very little of which was interesting. I therefore reduced my list to the 22 core questions shown in appendix b[2]. The interviews shifted from question-and-answer exchanges to a richer, more conversational format. I rarely asked all 22 questions, concentrating more on the nurturing of an intersubjective dynamic which drew out long stretches of talk and formal narratives from my interviewees. My approach became more like that adopted in narrative analysis, where an interview might consist of only five to seven very open ended questions (Riessman, 1993: 55) accompanied by follow-up questions in order that 'the answers given continually inform the evolving conversation' (Paget, 1983: 78).

As shown in the appendices, my questions were structured in groups corresponding to the broad themes I identified as dominating explorations of cyberculture:

1. introductory-icebreaking
2. discourse-power-legitimation
3. virtuality-the real
4. language-presence-absence-text
5. subjectivity-embodiment-gender

This is not to say that my approach was deductive – rather, I wished to generate talk which entered into engagement with these particular theoretical themes.

Transcription and reading

The issue of how to approach the representation of speech as text is a problematic one for social researchers. As Mishler has pointed out, the naïve

[2] The appendices show the questions I asked students – those I used with teachers varied slightly from these.

realist assumption of a non-problematic relation between spoken and written language is no longer tenable:

> the decisions concerning how to produce a transcript – what we include as relevant features of speech and how we arrange and display the text – are among the many decisions we make in the course of doing our work. All of them reflect theoretical assumptions about relations between language and meaning, and between method and theory… Transcripts are our constructions and making them is one of our central research practices. (Mishler, 1991: 277)

The choices made in transcription inform or, indeed, partly *are* the meanings generated by the interview text. As Mishler reveals, 'transcription is not merely a technical procedure but an interpretive practice' (259). That transcription involves theoretical choices, that it should involve 'critical reflection on the intractable uncertainties of meaning-language relationships' (260) tends to be overlooked in what Scheurich calls 'conventional' approaches, in which:

> The transcribed text of the interview becomes data in a sense very similar to qualitative data (Bogdan and Biklen, 1982, Strauss and Corbin, 1990). The physical, non-verbal aspects of communication disappear. The variations in tone, intensity and rhythm disappear. Even the pauses often disappear. The words…are totally decontextualised. The lines of the text are numbered. The words and lines are divided into monads of supposedly unambiguous meaning. (Scheurich, 1997: 62)

Interview snippets, cleaned up, stripped of context, uncertainties and distinctive 'voice', are used to provide naturally present validation of the meaning-making endeavours of the researcher. One strategy for resisting this tendency – one which works from the idea that speech is closer in form to poetry than it is to prose (Tedlock, 1983) – is to represent interviews in poetic form (Patai, 1988, Riessman, 1990, Richardson, 1997, Poindexter, 2002):

> Writing up interviews as poems, honoring the speaker's pauses, repetitions, alliterations, narrative strategies, rhythms, and so on, may actually better represent the speaker than the practice of quoting in prose snippets. (Richardson, 2000a: 933)

While I find the poetic form a little self-conscious, my approach to transcription does move towards this form of representation in its inclusion of the 'messy' elements of speech – the pauses, stutterings, discourse markers (sort of, kinda, y'know), non-lexicals (um, em, mmm hmm) and repetitions – which occur throughout interviewees' accounts and my own interventions (these are also included). I use punctuation in a way which aims to replicate to some extent the rhythms of the speech, rather than normalising it in terms of the conventions of written text.

These strategies are modest and certainly not rigorous in terms of the transcription techniques employed in discourse and conversational analysis. My aim in using them is partly that, by making interview extracts harder to read, they emphasise to some extent the problematic nature of speech 'entextualisation' (Mishler, 1991: 259) and the complexities of the relation between language and meaning. In addition, such strategies retain the indeterminacies, patterns and repetitions of speech acts in such a way that extends the meanings that can be drawn from them in interpretation – it makes them harder to pin down. I believe they also help to maintain a level of polyvocality, working against the tendency to efface the particular and distinctive narrating voices of individual interviewees by normalising them and making them subordinate to that of the researcher-writer.

The figure below presents a random passage of interview text transcribed first in my preferred way and then, for comparison, re-transcribed with its messy and disruptive features smoothed out. Transcription a) demonstrates the following features of my preferred method:

- Commas are used to indicate short pauses.
- Longer pauses are indicated by [pause].
- [pause] is also used multiply – [pause][pause] – to indicate longer moments of hesitation.

- I use full stops only where there is a clear pause and shift in the flow of talk.
- I do not capitalise the first word of new sentences, since I found that doing so tended to give a heavy emphasis to sentence structure appropriate to written forms but less true to the flow of the talk as I experienced it.
- Strong emphasis is indicated with *italics*.
- Identification of who is speaking I leave to the reader – in context, it is generally fairly clear.

it was interesting that the course director actual well he did it with me I don't know if he did it with others, but he was emailing me individually saying could I possibly get the other people in my group who weren't talking maybe to do something, which I thought was [pause] an odd thing to do. there again [pause] I'm not quite sure what else he could have done, y'know he was he was trying to use the the more, *participative* people to try and chivvy along the others. I suppose he didn't want to be too interventionist and heavy handed and maybe thought get the group to chivvy along each other.

mmmm, and did you?

um, to a certain extent, I wasn't quite sure if that was my role to do that. um [pause] [pause] I mean I could understand why he wanted to do it but on the other hand, y'know I'm not sure that I y'know [pause] that was a legitimate thing for other participants to do. it's a bit like in a tut y'know in a face to face tutorial, the tutor saying 'can you make those other people in your group talk a bit more', I mean [pause] again a tutor probably wouldn't do that.

Transcript a): my preferred style

Interviewee: It was interesting that the course director was emailing me individually, saying could I possibly get the other people in my group who weren't talking maybe to do something. Which I thought was an odd thing to do. There again, I'm not quite sure what else he could have done. He was trying to use the more participative people to try and chivvy along the others. I suppose he didn't want to be too interventionist and heavy handed and maybe thought [he could] get the group to chivvy along each other.

Researcher: And did you?

Interviewee: To a certain extent. I wasn't quite sure if that was my role to do that. I could understand why he wanted to do it, but on the other hand I'm not sure that that was a legitimate thing for other participants to do. It's a bit like in a face to face tutorial the tutor saying, 'Can you make those other people in your group talk a bit more?'. I mean a tutor probably wouldn't do that.

Transcript b): 'cleaned-up' version

The choice of words is difficult when it comes to describing what I actually do with interview texts. To say that I analyse them is to employ the discourse of the laboratory and to imply that some kind of objective meaning is extracted from them. To say that I interpret them is to hint at the hermeneutic unveiling of hidden, extralinguistic truths. *Reading* is perhaps the least problematic term

available so I have chosen it for the heading of this section, though in truth I use all three both in this chapter and throughout the thesis.

My approach to reading the texts is generally to take short to medium-length extracts, and discuss them in terms of the literary devices being used in the construction of their meaning, focusing on their indeterminacies through multiple readings, considering the rhetorical choices made by narrators, the patterns, structural properties, metaphors, key words and themes they employ in talking about education in cyberspace. My approach is a form of textual analysis which has debts both to hermeneutics and deconstruction.

I used the software package QSR N6 (version 6 of NUD•IST) for managing my texts. NUD•IST was designed to support the complex codifications and classifications of grounded theory (Cresswell, 1998: 155) and I do have reservations about certain of the assumptions built into it. In its focus on textual analysis as a technical procedure it does tend to detach the process from what Mishler calls, 'its deeper moorings in critical reflection on the intractable uncertainties of meaning-language relationships' (Mishler, 1991: 260). It assumes an approach which breaks down texts into codifiable monads which can then be compared, analysed and counted much like blocks of quantitative data (Scheurich, 1997: 62). Context is lost, along with many of the ambiguities and uncertainties of interview discourse.

However, being aware of the assumptions informing software design is the first step in resisting them. My own use of N6 extended simply to using it as a 'base' for storing all my interview texts and notes. Doing so enabled me to run searches across all the texts at once, and to tag narrative and thematic sections in a way which made them instantly retrievable.

Validity

I would like to end this chapter by considering what is perhaps the thorniest issue of all in social research. The stated conditions by which this thesis meets doctoral standards are those indicated in the research degree regulations[3]. These are minimal, revolving around such incommensurables as 'originality' and 'examiner satisfaction'. That there are other conditions by which it will be judged to represent legitimate knowledge is left unstated. That the criteria by which its validity will be assessed are largely left unsaid is perhaps because validity itself is an insoluble problem, 'a 'limit question' of research, one that repeatedly resurfaces, one that can neither be avoided or resolved, a fertile obsession given its intractability' (Lather, 1993: 674).

The insolubility of the question rests in the loss of the foundations upon which truth can be asserted. In what terms can legitimacy be spoken after 'the crisis of representation' has removed any possibility of an extralinguistic truth against which knowledge claims can be measured? Any attempt to fix validity criteria in something beyond the particular and context-specific is doomed to succumb to a foundationalism which is no longer tenable. Lincoln and Guba's 'naturalistic' criteria (1985), for example, translate the conventional standards for assessing validity in quantitative study for ones more appropriate to qualitative work, replacing internal validity with credibility, external validity with transferability, reliability with dependability and objectivity with confirmability (Lincoln and Guba, 1985: 294-301). Such a move, however, can be accused of 'simply transporting conventional science concerns, regulations, or truth claims into a postpositivist frame' (Scheurich, 1997: 81).

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[3] 'The PhD shall be awarded to a candidate who, having critically investigated and evaluated an approved topic resulting in an independent and original contribution to knowledge and demonstrated an understanding of research methods appropriate to the chosen field, has presented and defended a thesis by oral examination to the satisfaction of the examiners' (QMUC (2001), 'Research degree regulations', in *Queen Margaret University College research handbook* Edinburgh: QMUC, pp. S1.)

Mishler (Mishler, 1990), as another example, attempts to bring the concept of validity in line with interpretive methods of inquiry by shifting its focus from the researcher's adherence to formalised principles to the social context in which the researcher operates. Validation is seen as 'the social construction of knowledge':

> With this reformulation, the key issue becomes whether the relevant community of scientists evaluates reported findings as sufficiently trustworthy to rely on them for their own work. (417)

Such a move does not, however, counter the 'policing' function of validity which is the focus of concern to postmodernist researchers. Scheurich makes the point that the many and widely varying types of validity – its 'masks' – all function to conceal an underlying sameness which is to do with constructing a firm boundary between what is 'in' and what is 'out', what is allowable, and what is not. As such, it is born of, and perpetuates, an imperialist project of domination:

> validity is a social practice drawn from the heart of Western darkness. It is an either/or bifurcation line that divides the privileged Same from the as yet untheorized Other, that establishes the 'valid' domination of the Same of the Other, that delineates the conditions under which the Other can be validly incorporated into the Same. (Scheurich, 1997: 89)

For Scheurich, validity can never be neutral, rooted in truth, but is inscribed in and by relations of power. In turn, Lather's moves toward reformulating validity are focused around 'rendering explicit the spaces opened up by the growing acceptance of epistemic antifoundationalism'. She moves the discussion of validity 'from epistemological criteria of truth as a correspondence between thought and its object to criteria grounded in the crisis of representation' (Lather, 1993: 686). In doing so, she proposes four 'types' of 'transgressive validity': ironic, paralogical, rhizomatic and voluptuous. Her project is summarised by Scheurich as being:

> to offer or 'incite' validity practices that simultaneously critique the dominance of the Same, undermine the metaphysical dualism of the Same and the Other, proliferate and appreciate difference (the Other) and invent, out of her own ethical/political yearnings, a transformative space in which a non-dualistic multiplicity (difference) is cultivated. (Scheurich, 1997: 89)

Lather's vision shifts validity entirely from the standard of truth revealed through method towards an immersion in the eternal play of difference. All that is left is to do away with the term completely.

Rather than being the birth pangs of a brand new, antifoundationalist stance to the problem of validity, Smith and Deemer (2000) see the positions taken by Scheurich and Lather as being the death rattle of the old 'epistemological project'. For them, it is time to 'change the conversation' (891), to accept our 'vulnerability and contingency' and stop agonizing over the opposition between foundationalism and the relativism that is simply an inextricable element of the human condition:

> We are finite human beings who must learn to accept, for example, that anything we write must always and inevitably leave silences, that to speak at all must always and inevitably be to speak for someone else, and that we cannot make judgements and at the same time have a 'constantly moving speaking position that fixes neither subject or object' (Lather 1993: 684). To lament this condition and to search for a solution to these 'problems' is actually to lament and search for a solution to our human finitude. (Smith and Deemer, 2000: 891)

They quote Schwandt's (1996) assertion that the acceptance of relativism does not automatically involve political laissez faire or paralysis in the face of the need to make judgements:

> We must learn to live with uncertainty, with the absence of final vindications, without the hope of solutions in the form of epistemological guarantees. Contingency, fallibilism, dialogue, and deliberation mark our way of being in the world. But these ontological conditions are not the equivalent to eternal ambiguity,

> the lack of commitment, the inability to act in the face of uncertainty. (Schwandt, 1996: 59)

For Smith and Deemer, therefore, the establishment of validity criteria becomes a moral and practical issue rather than an epistemological one – it is about taking culturally and historically situated decisions rather than establishing abstract ways of knowing. All academics bring to the task of judgement a 'list' of evaluation criteria, they claim. Many of these criteria are unarticulated, or indeed are impossible to articulate. Others are agreed through discursive exchange. All however, are rooted in a subjective standpoint and are 'always and ever subject to constant reinterpretation' (Smith and Deemer, 2000: 888). Such lists are not part of a broad epistemological project, they are 'a practical matter; they are worked and reworked within the context of actual practices/applications and cannot be set down in abstracted formulas' (889).

I have my doubts about the ease with which Smith and Deemer, while refuting foundationalism, find a firm foundation for judgement in the acceptance of 'human finitude'. There is a humanistic assumption here that does not engage in the issue of how notions of such 'finitude' might be contested from various cultural – particularly religious – standpoints. However, I agree that judgements must be made, and that contingent decisions must be drawn as to what constitutes, in a given context, good or bad inquiry. The kind of pragmatic relativism they propose – the shift they inscribe away from abstraction towards the employment of open-ended criteria which are, above all, applied individually, in specific contexts and to specific projects of inquiry – seems to be a manageable way forward. Thus I propose, for this project, my own current and open criteria which I offer as representing the standards by which this thesis might be judged. I suggest the text should be:

Open – Does the text invite interpretive responses? Is it suggestive? Do the readings it offers incite readers to construct creative alternatives? Does it resist closed judgements and the temptation to make watertight arguments, while still

saying something interesting and convincing? Is it open to 'undecidables, limits, paradoxes, discontinuities, complexities' (Lather, 1993: 686)?

Reflexive – Is the work explicit about the contingent and subjective nature of its truth claims? Is it honest about its working to construct rather than reveal meaning? Is my own position as a researcher with my own 'interpretive baggage' properly acknowledged?

Aesthetic – Is the text well written, not boring? Does it employ rhetorical and literary devices that work? Does its style light up its topic?

Generative – Do the readings offered by the text generate engaging new 'truths'? Do interview readings offer insights beyond what might be achieved by interviewer or interviewee or reader alone?

Informed– Are its theoretical perspectives sufficiently well thought through? Is it explicit about what they are? Does the work acknowledge its debts?

Affecting – Does the text work to draw the reader in emotionally and intellectually? Might it generate new questions or inspire new practices? (Richardson, 2000a)

Committed– Does the text make a fair and respectful representation of the contributions of interviewees? Does it work within an informed perspective on gender politics? Does it take an informed stance towards the constraints of authority and the operations of power?

Questioning – Does it unsettle received truths? Does it take into account the problematic nature of representation? Does it restore the topic to its 'original difficulty' without 'succumbing to despair' (Caputo, 1987)?

Whether or not these criteria work to construct a thesis good enough to meet the terms of examiners remains to be seen. As Searle (1969) asks:

> What does 'good' mean anyway? As Wittgenstein suggested, 'good,' like 'game,' has a family of meanings. Prominent among them is this one: 'meets the criteria or standards of assessment or evaluation'. (Searle, 1969: 152)

What these standards or criteria might be is not open to me. Only if there was a single, fixed method with firm, agreed validity criteria for the kind of inquiry I

am engaged in could this be the case, and much of this chapter has been occupied in resisting such a state. Overall, however, I have attempted to ensure this thesis is valid within the terms of the criteria defined above.

Chapter 2a: coda

Interviewer, interviewees and interviews

Interviewer

To situate myself briefly, I am white, female and from a middle-class, English background. After graduating in English Literature from Edinburgh University, I spent five years working in Scottish and English universities supporting academic staff in using internet technologies for learning. Alongside the desire to pursue a deeper knowledge of the theoretical and cultural impact of new media, I took my three and a bit years as a doctoral student with three aims – as a career break, as career enhancement, and as a way of moving back to Scotland from England. My project was originally intended to focus around literary hypertext, but I very quickly realised that this was a topic that was already almost exhausted theoretically, and that my valuable three years of relative freedom might be better spent thinking more deeply about the internet, learning and the university – an area which, by contrast, is theorised far less than it might be.

Interviewees and interviews

I have several aims in presenting here a brief description of each of my interviews. Most straightforwardly, I wish to be explicit about who my interviewees are in terms of their gender, age and nationality, and the kinds of online learning programmes they were engaged with. In this sense, my aim is that these summaries can be referred back to as a way of providing context when individual passages from my interviews are presented in the body of this thesis.

Beyond this, I hope that by describing as well as I can the frustrations and exhilarations I experienced while conducting my interviews, I can give an honest sense of how my skills as a researcher and interviewer developed over

the period of this study. By briefly describing factors such as location and my own state of mind at the time of the interview, I try to be honest about the conditions under which my research material was generated, in the process undermining the possibility of a straightforward claim to objectivity. I wish to highlight something of the 'messiness' of the research process, and to limit the impression that I might give, in drawing on these interviews, that they represent an uncomplicated basis for making truth-claims.

In the main body of this chapter I highlighted how, in the transcription method I developed, I tried always to preserve what I could of the distinctive voice of each interviewee. In the summaries I give here, I continue to do the best I can to construct my interviewees as people rather than as data channels. I found it more appropriate to attempt this by writing in a naturalistic style which contrasts with the more formal mode of academic writing I adopt in the rest of the thesis.

My interviews took place over a period of about nine months. I recorded my impressions of each event at the time they took place, and present here a short description of each occasion according both to these notes and to memory.

Interview 1: Sarah[1]

Sarah is a good friend of mine, which is why I asked her to be my first interviewee. I knew she'd be tolerant of me and let me practise on her. She had been a student on the Cultural Studies course[2] two years previously, when it ran for the first time using FirstClass. She was now a teacher and research student herself, Scottish and in her mid-twenties. We spoke in the living room of her flat. When I turned the tape recorder on we both became nervous – this was my first experience of the performance for the tape which constituted every

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[1] I have changed names.

[2] The three programmes the majority of my interviewees were drawn from are described on page 48. In summary: one was a level one Cultural Studies module with face to face lectures and tutorials delivered using FirstClass; one was a part-time Masters level module in marketing, delivered using a comb ination of face to face seminars and WebCT; the third was a part-time Masters module on Infection Control, delivered wholly online using WebCT.

interview. The tension made us take on a new way of speaking, a conversation which was apparently and intently focused on each other was really directed at the recording machine sitting between us. As interviews went on I think I got better at pretending it wasn't there, but the machine was always the third party, the mediator in a sense of the interviews which never felt just like two people speaking together.

Interview 2: Jimmy

Jimmy agreed to speak to me after I had been along to the Masters Management class to ask for volunteers. This class had been using WebCT for communication and materials distribution, and were getting towards the end of their first semester of part-time study. I think his main motivation for talking to me was that he wasn't happy with the module, thought it had been sloppily put together, and wanted to tell someone, to get it on the record, even though he knew the interview was confidential and wasn't about programme evaluation. He was a Scot in his mid 40s, with a background in business, and it was to the business world that he was oriented when engaged in his learning programme. This seemed to me to be the basis of his dissatisfaction. He was a 'practical' man, to the point almost where I think that he couldn't see the point of learning in a context removed from the world of business. For him, the novelties involved in using technology for learning were part of this – the negotiation of identities, the emergent learning cultures – were for him simple lack of purpose. I found him interesting to talk to and he made me laugh. We spoke on neutral territory, in a small, basement room on the Queen Margaret campus where I interviewed all the Management students, except Heather.

Interview 3: Sue

Sue is another friend, also a very tolerant and patient person who I knew would bear with me. I was lucky to have a couple of willing, unthreatening friends to talk to in these first, difficult interviews. Sue is an ex-colleague, I worked with her for about four years. She is English and aged about 45. Her job had been to develop distance and flexible learning within her university, so she had taken a

postgraduate diploma in online learning around two years previous to the interview. She still worked as a developer within her institution. The course had been run from Australia using synchronous chat and paper-based materials. Sue was the only participant who was from the UK, a totally distant student. We spoke in my flat. Sue is a very tactful person anyway, someone who never gossips or spills the beans – I knew this from working with her. I was still surprised though at how cagey she became once the tape machine was on, and she was on the record. Not cagey about herself – she was in fact very honest about how and who she had been online – but she was very protective of her institution, and the institution that had delivered her course. This made me a little nervous and I felt the interview was quite dull. It was only when I went back through the transcripts that I realised how honest and interesting she had been.

Interview 4: Heather

Heather was one of my favourite interviewees; the interview we had was one of the best. She helped me to drop my overly-structured approach to the interview by drawing me in to her stories, and she gave me confidence in my budding style. She, like Jimmy, was a volunteer from the Masters module in Marketing. I was annoyed with her prior to the interview because she had stood me up twice – I would have given her up on the third attempt. I didn't realise that she lived more than 40 miles away and had multiple demands on her time. She was around 40 and was born and brought up in Scotland. She spoke with a confidence half masked by an ironic take on her own place within the university – as though it was somewhere she didn't quite belong. She spoke a lot about her family, so I know that she had a husband who was very into computers and two sons – one young one still at home and one who had left. We spoke in my office, something which I generally tried to avoid because I thought that being on my patch gave me too much of an advantage. Heather didn't seem too worried by it though – she was the only interviewee who accepted my offer of coffee and biscuits.

Interview 5: Cornelia

We spoke in the little airless room underneath QM faculty office where I also interviewed Jimmy, Gianni and Paulina. Cornelia was about 30, a German Marketing student living in Edinburgh with her husband who worked, I think, in computers. I think perhaps she agreed to speak to me partly as a training exercise, since she was about to embark on a series of interviews for her own Masters project. Her English was very good. Maybe it was because it was late afternoon, the room was stuffy with no daylight and we were tired, but we didn't hit it off. I liked her least of all my interviewees. Her take on the interview was that it was going to be a straight question-and-answer session. My efforts to get her to chat to me all failed. Her language was very pared-down, she spoke with little emotion and no imagination. That she was not speaking in her first language was obviously a factor in this, and perhaps if my mood had been better I would have worked harder to get around this, to draw her out, but her manner wasn't conducive. We had a bust up – the only time anger flared up in any of my interviews. It was over the issue of online identities, when she got cross with me for pressing her. Perhaps because of my own inexperience, I didn't make it clear enough that I saw the interview as a conversation rather than as a data gathering exercise, so she thought I was trying to 'skew my data'. She accused me of dodgy interview practices. Really it was that I was intrigued by her absolute conviction of a singular selfhood in any and all situations and circumstances, and I wanted to know more about where her self assurance came from.

Interview 6: Gianni

Gianni was another overseas student, an Italian, on the Management module. His English was quite broken and tentative, but he spoke with energy and passion about his learning experiences. He was in his late 20s. I think he probably signed my volunteer sheet out of politeness, because he seemed a very courteous person. Sometimes he would use Italian words and we would negotiate a translation of them – I was amazed at how, by working in this way, his vocabulary expanded even over the course of our interview. You could tell

he was really sharp. Gianni found studying in Scotland to be friendly and relaxed after what he described as the strict hierarchies operating in his Italian university. Even so, throughout the interview I couldn't stop thinking about how a few months ago he had been studying in Sienna in Tuscany and now here he was on a rainy suburban campus in an Edinburgh November.

Interview 7: Paulina

Another Italian Masters student, Paulina was in her early 20s. Her English was almost perfect with a hint of California from a year studying in the States. She was loquacious and she used her body – particularly her hands – a lot when she spoke. This was interesting to me, because for her one of the major frustrations of learning over the internet was the disappearance of the body language that was so much a part of her speaking self.

Interview 8: Charlie

Charlie was my first undergraduate interviewee from the Cultural Studies module. All these students – Charlie, Alison, Daisy, Megan, Marina and Nancy – were in their late teens, and were close to completion of their first year at university. All, except Nancy, were Scottish. They had signed a volunteer sheet after I had spoken to their class at the beginning of a lecture. I had booked a room at the campus where this cohort of students were based, and was dismayed on arrival to find it full of builders' equipment, papering tables, pots of paint and white sheets all over the floor. I had to beg a room from a member of staff who was going to be out most of that afternoon, so on starting the interview I was hassled and a bit annoyed. It was also really hot. Charlie quickly made up for all the harassment. He was bright, funny and really conservative. He had a cocky kind of confidence which meant he needed very little prompting from me, and his often extreme resistance to the whole idea of online learning made this interview one of the most interesting and revealing of them all.

Interview 9: Alison

I interviewed Alison the day after Charlie. My reserved room was still full of builders, so I again had to do some grovelling to get the same room I had used the day before. The interview was interrupted regularly by the telephone ringing and by people knocking on the door. Alison was quiet and friendly, easy to talk to and patient of interruptions. Much of her experience as a learner seemed to revolve around her shyness, and although she said she enjoyed the sense of invisibility which enabled her to speak out online, she was also articulate and insightful in discussion face to face.

Interview 10: Daisy

Daisy was chatty and breathlessly effusive. She seemed often to mask her intelligence under a ditzy persona – her favourite word for herself was 'muppet'. She said she had volunteered to be interviewed because she 'felt sorry for me' because hardly anyone had signed my interview sheet. This was puzzling to me (as well as a bit irritating) because I'd had about 20 signatures and hers was near the bottom. We talked in the borrowed room straight after Alison, and it was during this interview that the room owner finally came back from her meeting and we had to leave. I had to halt the interview, go and find another room – one in which a workshop was just finishing – ask stragglers to leave and then set up all my kit again. Daisy was very patient – in fact the hassle to an extent relaxed us both and the rest of the interview flowed.

Interview 11: Megan

By the time I interviewed Megan, the builders had finished with my reserved room, so our discussion was tranquil and uninterrupted except by paint fumes. Megan was pale, clever and quiet. She was one of the few interviewees I had who seemed really to embrace technology as an environment for learning, and also as involving to some extent a different way of being. Her signature phrase was, 'It's not good, not bad, just different'. She was in a sense more sophisticated than many of my other interviewees, recognising that being online involved being in a new cultural space made her able to speak about it in terms

other than purely comparative ones with face to face learning. The fact that she was very shy made me wonder why she agreed to the interview. On reflection I think that she was on quite a conscious mission to overcome her own timidity, and I think that might have been part of the reason why she agreed to speak to me.

Interview 12: Marina

Marina began our interview by apologising for her volubility, and she was really a talker. 'Yeah', she said, 'em, I'm kind of known for my talking and talking and talking and talking!'. We got through two tapes. I spoke to her on a sunny afternoon just after Megan in the newly painted room. I felt relaxed with these girls, I enjoyed listening to their talk and was in a good mood. At this time I was learning quite quickly how to keep an interview on track using key questions and relatively few interruptions. Marina in particular helped me with this, since she got more and more interesting the more I just let her speak on.

Interview 13: Nancy

Nancy was a loud, confident Texan girl. Often I could tell from her responses that she hadn't really understood what I was asking her, but unlike the others, she never asked for clarification. She was funny and articulate. Her key phrase was, 'So I'm just, like, hello?'. Nancy was trying to lose weight, and used a lot of food metaphors to describe her experiences online. The online learning environment her class had been using was the 'icing on the cake' but also the 'butter', whereas the lectures were 'like the flour'. The internet was, for Nancy, a 'big soup', 'y'know everybody's there and we're all mixed in!'.

Interview 14: Richard

My interview with Richard took place in his office at the university where he worked as a developer and teacher of education. His experience of learning online came from his time spent on a professional development course a few years previously. This had been run on a distance basis by the Open University, and he was able to describe a strong community of learners who had come

together for formal and informal learning using the communication software FirstClass. Although Richard was an experienced academic and knew far more about education than I did, the interview was mainly interesting due to his (at times extreme) candour about his own experiences online as a learner. Richard was witty and clever, English and aged around 50. Also an experienced researcher, he quickly grasped my preferred interview format, and told me many free-flowing stories about his time as a learner in cyberspace.

Interview 15: Mark

Mark was a senior academic within my department. This gave the interview an air of a test for me. He had been responsible for the setting up and running, over a number of years, of the Cultural Studies module taken by Sarah, Nancy, Charlie, Daisy, Alison, Marina and Megan. His insights and stories were valuable and engaging.

Interview 16: Tom

Tom was the course leader for the Management Masters programme, a committed WebCT user and developer of e-learning. Of the teachers I spoke to, Tom was probably the most interesting in that, being quite a shy person and lacking in confidence, he seemed to look to the technology as a way of creating some distance between himself and his students. I had badgered him for some weeks before finally he caved in and agreed to set up a date for an interview. We spoke in an empty classroom. He seemed nervous but gave me a very open and honest account. I didn't really enjoy this interview at the time. Tom made me anxious in the way he kept drawing analogies between the interview event and the teaching event, casting me in the role of questioning teacher, and making me feel somehow bossy. However the transcript turned out to be one of the most interesting and useful for me. Tom is a Scot in his late 30s.

Interview 17: Diane

I used the little, windowless, airless office in the basement of Queen Margaret to talk to Diane, who was a friend of mine and a fellow postgraduate. She had been

a teaching assistant on the Cultural Studies module over two years of the programme. We had taken the same, very traditional, undergraduate degree in literature, and so were in a sense coming from the same direction in our approach both to Cultural Studies and to the topic of online learning. This in itself helped make the interview an interesting one, though I think by this time I was getting wary of interviewing friends and colleagues, growing to prefer the distance of the, in comparison straightforward, interviewee-interviewer relationship. Diane is Scottish and in her mid-twenties.

Interview 18: Delia

Delia was another teacher and developer of the Cultural Studies module. She invited me to her house on a sunny morning in the summer, made me coffee and talked very candidly about the troublesome cohort of students who had just come through the programme. It seemed there had been a particular student who, seeing the online mode of learning as a means by which the university ripped off its students through substandard pedagogy brought to bear on growing masses of unsupported learners, had initiated a campaign of sabotage against Delia's module. This was a story I would have liked to have built into my thesis, but for which a space never appeared. Delia was originally from England, and was aged about 50. I appreciated her candour, and was impressed by her commitment to her students and to her teaching.

Interview 19: Anna

Anna was a nurse at a posh private hospital in Edinburgh. She was a student on the Infection Control course and in her mid-forties. She was Scottish, as were all the people I interviewed from the Infection Control course. When I got home after the interview I found that the recording machine hadn't worked, and the interview was lost. I have been luckier than other researchers I know of, in that this only happened once.

Interview 20: Lucy

Lucy was the developer of the Infection Control module being taken by Anna, Felicity, Marianne and Karen. I travelled up to Inverness to interview her, on the induction day of the programme. This was a busy event for Lucy, and I felt guilty about asking her to leave her students to talk to me for an hour, even though she had herself invited me. I had spoken to Lucy on the phone, but had not met her before. I owed her a big debt in that she had gone out of her way to introduce me to the students and staff on her programme, and to encourage them to be interviewed by me. However, on beginning to talk to her I realised that she had never actually taught students online – her role in the Masters programme had been development and administration, meaning that all our chat about teaching using technology was speculative. The interview turned out to be of very limited value, so much so that I never actually transcribed it.

Interview 21: Marianne

Marianne was about 30, and a student on Lucy's module. I interviewed her during the induction day in Inverness. She was probably the most insightful and imaginative of all my interviewees, in addition to which she was completely in love with her computer and with the internet. 'Sometimes', she told me, 'I really enjoy the sound of the modem dialling in, you know after it dials in you get that kind of "kkkkkkkkkk" and for me that sounds like the internet. It sounds massive, it sounds like information kind of buzzing at me. I really like it. Almost everything about it.'

Interview 22: Felicity

Felicity was another nurse, on the same course and about the same age as Anna. She was based in Glasgow, in a rundown local hospital on an estate on the outskirts of the city. I interviewed her there in her office which was noisy and next to the toilet. She was a warm and open person, who spoke interestingly about her experiences over a distracting George Clooney screensaver.

Interview 23: Karen

Another infection control nurse, and in her late thirties, Karen spoke to me in her house on a wealthy new-build estate on the outskirts of Glasgow. Despite the fact that she gave me coffee and a plate of quality biscuits and mini-mars bars, this was one of my worst interviews. Part-way through, we were interrupted by Karen's husband who assumed that I was a market research interviewer, and told Karen she should have chucked me out. On being told that I was 'from the university' he stalked out without apologising, and from then on I felt so distracted by resentment I found it hard to focus on what Karen was saying. Karen's experience of being online was dominated by her conflict with her tutor, who had begun the semester badly by chastising her for typing in capitals.

Interview 24: Des

Des was a tutor on the Infection Control module. He was in late middle-age, and had had a long teaching career, but had just completed his first academic year of teaching online in a distance mode. I interviewed him in the meeting room in his department. He had some interesting insights, but a very inarticulate way of speaking which never quite finished sentences or followed thoughts through. By this point, towards the end of my interviewing period, I was aware of how hugely time-consuming transcription was turning out to be. While Des was talking I couldn't help imagining myself struggling over his interview tape.

Interview 25: Joni

When I emailed Joni to fix up the interview, I asked her if she could book us a quiet room on her campus, for concentration and confidentiality. When I turned up, however, she stuck me on a sofa in a corridor outside the office of her boss. This was distracting. Joni was in her forties, and was a long-standing developer of 'e-learning', based in the central support unit of her institution. She was currently involved in the teaching of an online professional development course in e-learning, using WebCT with distance students from around Scotland.

Chapter 3[1]

Metamorphosis and the identities of learners and teachers in cyberspace

Introduction

I begin this chapter with the myth of Arachne, the story of a relationship of competition between teacher and student, and an introduction to the theme of mutability which runs throughout this thesis. I suggest that this story embraces many of the themes which are important in the consideration of the way computer technology is affecting pedagogy and its theoretical contexts. I use this myth here as a way of exploring the competing claims of law and desire acting upon learners and teachers online, claims expressed visually in the competing tapestries described in the story, and then extend this discussion into an outline of the place of desire in Lacanian theory relating to the formation of the subject.

From this theoretical basis, I then consider the issue of the formation of learner and teacher identity in the digital realm. Using the narrative of the story of Arachne alongside the accounts of learners and teachers experiencing education within cyberspace, I explore attitudes to the issue of identity formation among online learners and teachers. I highlight the common perspective emerging from students' narratives which views new modes of identity formation negatively, judging the possibilities of the multiple subject as a dangerous deceit, a deviance or mutation of the natural, and placing emphasis on the importance of truthfulness to the single, embodied identity. I then compare these perspectives with the accounts of tutors for whom, surprisingly, the online space becomes a place in which traditional hierarchies can be re-asserted, and conventionally 'teacherly', authoritarian identities re-cast.

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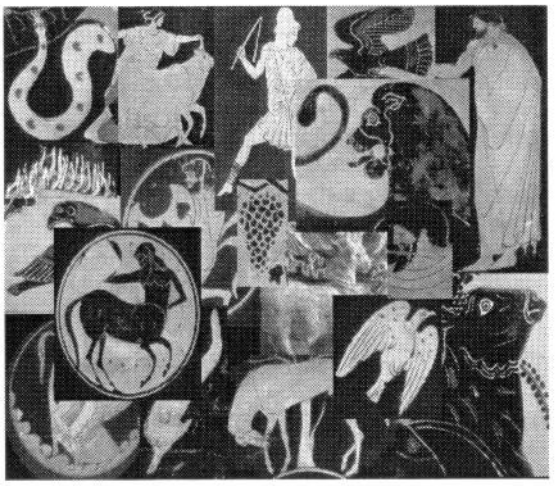
The myth of Arachne

Ovid tells the story of the metamorphosis of Arachne:

Arachne, the motherless daughter of a cloth dyer, was famous for her skill as a spinner, weaver and clothmaker. Her talent was so renowned that the nymphs would gather around just to watch her working. Everyone knew that she had been taught this skill by Athene, goddess of reason and law, and inventor and teacher of women's arts. Arachne, however, persisted in denying that she owed anything to Athene's teachings, and to prove it she challenged the goddess to a weaving competition. Athene, affronted, agreed, and each began her competing tapestry.

1. The tapestry of Athene

Athene wove a cloth with a central panel showing her victory over Neptune on the Acropolis of Athens, in which, by causing an olive tree to grow from the rock, she laid claim to the city. The corners of her tapestry showed scenes of mortals whose violation of the laws of the gods had caused them to be punished by metamorphosis – Haemon and Rhodope becoming mountains, the queen of the Pygmies becoming a crane, Antigone becoming a stork, Cinyras' daughter metamorphosed into the form of a temple.



2. The tapestry of Arachne

Arachne wove a tapestry showing the metamorphoses undertaken by the gods in order to have intercourse with mortal women. Jupiter is shown as the white bull carrying off Europa, as the swan pinning down Leda, as a satyr, an eagle, a shower of gold, a flame, a shepherd and a snake. Neptune is shown as a bull, a ram, a horse, a dolphin and a bird. Apollo appears as a peasant, a hawk, a lion and a shepherd. Bacchus is a bunch of grapes, and Saturn is shown in the shape of a horse, siring the centaur Cheiron – half horse, half man.
Athene sees that Arachne's tapestry is flawless. Infuriated by her rival's success, she hits her over the head four times with her weaving shuttle. Arachne, terrified, puts a noose around her neck as if to hang herself. Athene relents and allows her to go on living, but for punishment turns her into a spider hanging from her web, destined forever to spin. (Graves, 1985: 96-98, Ovid, 1986: 134-138 (book IV, lines 1-147), Bell, 1991: 58, 84-86)

Mythical themes

For me, this story represents a mythical encapsulation of the paradigm shift taking place as learning moves into the digital realm. The clearest analogy – that of the mastery of the medium of the web, the woven tapestry – is only part of its richness. This is a story about the power relationship between a teacher and a student; about different, literally competing, ways of creating, or weaving, the world. It is also about mutability, deceit, mutation and metamorphosis – these are to be the central themes of this chapter.

In Athene and Arachne we see represented, respectively, the figures of teacher and student. Athene's tapestry places herself as teacher at the centre – the

miracle of her own creativity is celebrated in the representation of the creation of the olive tree. This firm centre anchors the rest of the tapestry, consisting of images of mortals transmuted into animals and objects as punishment by the gods for their pride. In this vision, metamorphosis is a punishment for transgression of the laws of the gods; stability and the rule of law are its key themes, with the stable embodiment of the mortal as the natural state and mutation as a mark of deviance. Athene represents the Cartesian subject, the acting subject firmly at the centre of a world ordered by reason.

By contrast, Arachne's tapestry is centreless. No one image holds down and fills with meaning or moral the images which crowd the woven space. In this decentred world metamorphosis becomes a motif of desire, a marker of the union between the mortal and the immortal, a dark celebration rather than a punishment. In challenging the hierarchy of teacher and student, Arachne illustrates other, more fundamental boundary transgressions – those between the mortals and gods, and between the animal and the human. In this sense, it is a cyborg tapestry. Haraway famously constructs the cyborg as a potentially dangerous yet celebrated figure, which:

> appears in myth precisely where the boundary between human and animal is transgressed. Far from signalling a walling off of people from other living beings, cyborgs signal disturbingly and pleasurably tight coupling. (Haraway, 1991a: 152)

Most closely associated with another boundary transgression – that between human and machine – the cyborg, cybernetic organism, represents an Arachne-like celebration of fluidity:

> a cyborg world might be about lived social and bodily realities in which people are not afraid of their joint kinship with animals and machines, not afraid of permanently partial identities and contradictory standpoints. (Haraway, 1991a: 154)

> Mingling erotically charged violations with potent new fusions, the cyborg becomes the stage on which are performed contestations

> about the body boundaries that have often marked class, ethnic, and cultural differences. Especially when it operates in the realm of the Imaginary rather than through actual physical operations (which act as a reality check on fantasies about cyborgism), cybernetics intimates that body boundaries are up for grabs.
> (Hayles, 1999: 84-5)

The two tapestries thus represent competing world views which operate within the various contexts of learning and teaching online. Athene's world of modernity – centred (either on teacher or learner), stable (as far as regards both textuality and the rules governing identity formation and body boundaries), and unambiguous as to hierarchical relations – is challenged by Arachne's vision of a decentred world of creative pleasure in boundary transgression, cyborg identities, 'potent fusions and dangerous possibilities' (Haraway, 1991a: 154) – the celebration of the fluidity of metamorphosis. The metaphor extends into the arena of learning online in that here pedagogical methods and intentions rooted in principles of textual stability and the dissemination of knowledge among stable, autonomous subjects is often at odds with a medium in which both text and subject are liable to metamorphosis, to the shape-shifting which is so much a feature of life in the digital realm.

If Athene represents modernity, reason and law, Arachne shows us a vision of postmodernity, of the celebration of desire. Before exploring further the implications of this clash of ontologies for learners and teachers in cyberspace, in particular its impact on modes of identity formation, I would like to extend my theoretical framework by spending some time considering the theme of desire, and the related issue of identity as something not given, but constructed.

Desire and the subject

The theme of desire is important in discussions of postmodernity, as Usher and Edwards point out:

> in postmodernity, sensibilities are attuned to the pleasure of constant and new experiencing, a desire which is its own end, unsubordinated

> to and therefore unconstrained by a hierarchy of foundational and transcendental reason and values. Experiencing becomes its own justification. In postmodernity the cultivation of desire threatens and to some extent replaces modernity's cultivation of reason. (Usher and Edwards, 1994: 11)

If Arachne's tapestry represents a world in which 'body boundaries are up for grabs' it is also one in which shape-shifting is embraced, caught up with the impulses of desire, rather than imposed as punishment as in the world of Athene. This theme of desire recurs in discussions of the postmodern subject, constituted through discourse, unstable, fragmented and in contrast with the subject of the Enlightenment which is experienced as stable, interiorised and centred in consciousness.

According to the psychoanalytic theory of Jacques Lacan, desire is central to the formation of our unconscious; it comes about as a result of loss, and therefore is not simply the desire for something external but is the desire for the completion of a lack within ourselves as subjects – 'I always find my desire outside of me because what I desire is always something that I lack, that is other to me' (Lacan quoted in Sarup, 1992: 68-9). What is this lack or loss which, according to Lacanian theory, causes us to be fundamentally at odds with ourselves, fragmented, subject to a desire which can never be fulfilled, which is 'insatiable' and 'absolute'? While accepting Belsey's point that 'to schematize Lacan's work, however helpful the process, is in the end to do an injustice to the texts' complexity, and at the same time to diminish their power of seduction' (Belsey, 1994: 54), I will acknowledge the compromise at this point, and attempt a summary which will necessarily involve simplification.

> In contrast to the Anglo-Saxon tradition which stresses the Lockean assumption of common-sense rationality, the Lacanian view stresses that debility – not ability – is at the heart of human beings. (Sarup, 1992: 62)

In infancy, the formation of a child's identity begins with misrecognition. During the mirror phase the infant first recognises its own reflection in a mirror.

At this moment it begins to see itself as an object separate from the things and the people which surround it. At the same time, the reflection the infant sees represents an unattainable version of the child's self, in that it appears complete, integral and 'in control', whereas the infant itself is still uncoordinated and not in full control of its own movements and functions. The image the child sees of itself is that of an outer skin, or an 'armour, donned at last, of an alienating identity' (Lacan, 1977: 4). Thus the image the child sees both is and is not itself. As Lacan writes 'the human individual fixes upon himself an image that alienates him from himself' (4), or in Ellman's words, the child 'literally loses himself in his own reflection' (Ellman, 1994) . The wholeness and harmony which the infant experiences pre-birth and in its early relation to its mother and its world is fractured and the construction of the child's ego begins.

The ego for Lacan is thus not about strength and agency, but about alienation and illusion. The spurious unity with which the child is confronted in its reflection represents a unity and stability that the ego continues to seek throughout life. As Sarup reveals, such unity is an attempt 'to find a way around certain inescapable factors of lack, absence and incompleteness in human living'. He goes on:

> This alienated relationship of the self to its own image is what Lacan calls the domain of the Imaginary. The Imaginary is the world, the register, of images, conscious or unconscious, perceived or imagined. It is the pre-linguistic, pre-Oedipal domain in which the specular image traps the subject in *an illusory ideal of completeness*. The Imaginary is to be understood as both a stage in human genesis, and a permanent level of the human psyche. (Sarup, 1992: 66) [my italics]

This initial alienation which occurs on entry to the Imaginary is reinforced when the child enters what Lacan calls the realm of the Symbolic, in which subjectivity is formed by the system of language. For Lacan, as with other post-structuralists, language is external to the subject, not a tool which we use, but a system which pre-exists our individuality, which constitutes our subjectivity and structures our unconscious. The loss involved in entering language consists in

the idea that, while entry to the Symbolic gives us the ability to become social, to form social relations and to articulate our needs, it also creates a division in the self. Because language is metaphorical (it always stands for something, it never *is* that thing) it can never fully express what we want, it is never complete or whole.

In taking up a position within language, that of the speaking subject or the *I*, we subject ourselves to the external system of language, to something outside ourselves which comes to stand in for the real, but unknowable, us. The system of language does not simply represent the world, it creates it, therefore also creating the subject who enters it. Belsey explains the loss involved:

> Language erases even as it creates. The signifier replaces the object it identifies as a separate entity; the linguistic symbol supplants what it names and differentiates, relegates it to a limbo beyond language, where it becomes inaccessible, lost. (Belsey, 1994: 55)

Or in Lacan's words, 'I identify myself in language, but only by losing myself in it like an object' (Lacan, 1977: 86). Desire emerges from this loss, desire which cannot be articulated, 'for an imagined originary presence, a half-remembered 'oceanic' pleasure in the lost real, a completeness which is desire's final, unattainable object' (Belsey, 1994: 5).

The relevance here to the concerns of this chapter rests not only in this vision of desire as the restless, unknowable, unnameable opposite of reason – an opposition represented in the two tapestries – but also in the critique of 'oneness' which emerges from Lacanian thought. As Sarup points out, for Lacan the principles of singleness, unity and indivisibility have become an 'ideology' attempting to 'close off the gap of human desire' (Sarup, 1992: 127). In Lacanian theory the human is not a unified, knowing and knowable unit, instead it is multiple, diffuse and fragmented, a process rather than a stable entity. In Belsey's words:

> The subject is … the site of contradiction, and is consequently perpetually in the process of construction, thrown into crisis by alterations in language and in the social formation, capable of change. And in the fact that the subject is a process lies the possibility of transformation. (Belsey, 1980: 65)

The theme of the subject in process, of the possibility of transformation, of the idea that we as subjects are never complete, never 'finished', that the process of our construction is subject to shifts in social contexts – in particular those of emerging media configurations – will be important throughout this thesis. This particular chapter will discuss the transformation or metamorphosis of the subject online, first in general terms, and then by focusing in on accounts of identity formation among online learners and teachers.

The mutable subject online

The internet as a realm in which the potential for metamorphosis of the self is almost limitless has been celebrated since the early days of the medium. The invisibility of the physical body and the opportunities for the linguistic construction of identity in online communication is seen by some to 'literalize Lacan's notion of the self as textual' (Monroe, 1999: 70). Turkle's well-known study of internet identities sees online self-creation and expression of multiplicity as part of a broader movement toward the postmodern, flexible self:

> The Internet is another element of the computer culture that has contributed to thinking about identity as multiplicity. On it, people are able to build a self by cycling through many selves… [It] has become a significant social laboratory for experimenting with the constructions and reconstructions of self that characterise postmodern life. In its virtual reality, we self-fashion and self-create. (Turkle, 1996: 178-180)

Within the classroom context, while giving voice to the multiplicity of the subject is rarely an explicit pedagogical aim, the anonymising and apparently equalising characteristics of computer mediated communication are often seen to offer benefits to learners beyond the pragmatic ones of freedom from some of

the temporal and spatial constraints of 'traditional', on-campus education. Findings which report increased contributions in online discussion from disadvantaged, 'shy' and female students (Alexander, 1997, McConnell, 1997, Belcher, 1999, Kimbrough, 1999), the success of the online environment in increasing collaboration among students (Hiltz, 2000), and the tendency for online student groups to become less focussed on their tutors (Dubrovsky et al., 1991, Eldred and Hawisher, 1995) all imply, however obliquely, that something shifts at the level of the subject when online learning takes place.

There are grounds, however, for being circumspect about the extent to which Turkle's ideas about the self-creating, self-fashioning internet subject can be applied to the online classroom. First and most obviously, Turkle's study is for the most part of individuals involved in MOOs – real-time, wholly anonymous virtual worlds in which the game of persona creation can be played with few immediate consequences for embodied 'real life'. In the pedagogical context, this is not usually the case. As Monroe points out, 'Anonymity in a networked classroom is a short-lived possibility; before long, an online persona will be fitted with a Real Life body.' (Monroe, 1999: 76)

Secondly, the whole concept of self-fashioning and self-creating paradoxically assumes a secure, stable subject somewhere in the background who does the fashioning and creating. It is an image which would sit more neatly in Athene's tapestry, one of a secure subject acting on a world where identity creation has knowable rules, rather than a vision of the subject undergoing the possibly exciting but also deeply risky metamorphosis which takes place at the prompting of desire.

There is an important distinction to be made here between *identity* and *subject*. Identity formation assumes an element of agency and of self-construction which is appropriate to the conscious exploration of alternative personas in online environments. Thus the notion of identity, considered within the context of a broader theory of the subject, is the primary issue in this chapter. As Castells

suggests, 'for most social actors, meaning is organized around a primary identity (that is an identity that frames the others) that is self-sustaining across time and space' (Castells, 1996b: 7). By contrast, as Poster points out, constitution of the subject is not a matter of conscious agency, in that it occurs through our immersion in our particular social and discursive contexts. Subject constitution therefore comes about in part via 'particular configurations of self and media' (Poster, 2001a: 8). This issue of the constitution of the subject through its relation to new media forms is the primary focus of the chapters which follow.

A third point at which caution must be exercised is that, in celebrating the challenge to the liberal subject posed by disembodied communication, there can be a tendency to under-recognise the significance of embodiment (Shapiro, 1994, McWilliam and Taylor, 1997, Whitley, 1997, Hayles, 1999). Even were communication to take place in a wholly anonymous, wholly online context, we cannot simply throw off the ways in which who or what we can be online is informed by our existence as subjects with bodies. Wilson sums up this point within the context of learning online:

> Although bodies 'disappear' when academic work moves online, the ways gender, race, class, and academic position (to name the obvious) shape discursive exchange cannot simply be overcome or put aside. The ways we speak/write and hear/read are thoroughly shaped by our experiences as embodied subjects. (Wilson, 1999: 137)

Or, as Stone puts it, 'No matter how virtual the subject may become, there is always a body attached' (Stone, 1991: 117). This does not mean that we have to take an essentialist view of the body as an end point to the free play of identity formation, indeed it would make no sense to do so when the body is itself so mutable, its form so socially determined and its surface so much the locus of our demonstrations of identity. It does, however, mean that we do not start completely anew when we work online. I return to this point in chapter seven, which makes a sustained exploration of the issue of embodiment and its significance to online learners and teachers.

Despite the reservations outlined here, however, it seems reasonable to approach the issue of identity formation online with a working assumption that within cyberspace identities are more freely transformable, boundaries less firmly drawn, and possibilities for metamorphosis of the self more open. Stone, even while keeping a firm grip on the importance of incorporation, sees a propensity to metamorphosis as a particular quality of the human in cyberspace:

> There is … a protean quality about cybernetic interaction, a sense of physical as well as conceptual mutability that is implied in the sense of exciting, dizzying physical movement within purely conceptual space. (Stone, 1991)

In the following section I explore these themes of mutability and identity as they emerge in my discussions with students and teachers. What surfaced notably in these discussions was a series of tensions between the possibilities of multiplicity and the sense of unity of the self as the desired, normal state. Dividing the individuals I spoke to into two groups – students and tutors – reveals two quite different perspectives on the possibilities of metamorphosis of the self in cyberspace.

Out of control: narratives of metamorphosis among students

A series of negative perspectives emerged among learners relating to the idea that the self online might be anything other than a direct representation of the single, embodied identity presented in the face to face classroom. There was a tension in the accounts of many of the students between the idea that they might, consciously or otherwise, have presented multiple personas online, and the sense that to do so was in some way deviant. In fact, 'negative perspective' is rather too light a term for the range of antipathies and anxieties voiced in the students' accounts. A unifying theme in all of these is the fear of *loss of control* through the modes in which identities are expressed online, a fear which, as I

will show in the next section, is directly at odds with the experience of the online teachers I spoke to. Within this theme, particular aversions emerged which I have grouped under three headings: danger, personality split, and deceit and perversion.

Danger

In some accounts, an expression of an alternative persona seemed, to the student, to be something like an act of self-betrayal.

if you do do it, and try and create a picture of yourself then you begin to believe it yourself probably. I didn't do any of that! [laughs]

[gap of 4 lines]

but there is a danger if you do that. you can develop this persona for yourself and get a bit carried away with it, and then it blends, because you've done it when you describe yourself and then it makes you change what you say, you get further and further and further away from the truth. so there is a danger I think, that you develop a picture of yourself and if you carry it to extremes you can't ever retract from it.

[gap of 10 lines]

I can see that there's a big danger there with online learning, you get yourself into a vicious spiral.
Sue

The fear of loss of control is expressed here in a series of spatial metaphors, almost as though the true self, grounded in reality, is potentially distanced ('further and further') by the constructed persona. This movement is cast as dangerous in the sense that the persona can gain a separateness which makes a re-establishment of unity ultimately impossible. The constructed persona is seen almost as gaining an autonomous power over the true self ('it makes you change what you say'). This is seen as purely negative, an 'extreme', 'vicious' movement away from 'the truth'. There is no joy here in the free-play of identity, rather a feeling of threat, of danger to the self.

I'm not, I couldn't do it! I don't know cos I feel like I'm not being honest, or I don't feel comfortable in doing it or something, or I feel like I'm going in a dangerous path.

why is it dangerous?

maybe dangerous because you may start thinking that 'whoa that might be true!', that would be, then you start believing it, when it's not really, so it's not even useful for yourself I think, you know. it's just that I think that [pause] it's like you know being an actor, sometimes it may be dangerous if you get, I'm not an actor or anything but you know, I think I could get too much into a character which is not yourself, and you kind of lose the division between the character and yourself. that is dangerous, because you may lose your balance, you know, in yourself.
Paulina

Again, there is danger in the threat to the 'real' self by the online, constructed self, as though the real self is something fragile, protected by a boundary which is too easily transgressed, too vulnerable to a loss of 'division'. In constructing an online persona we again risk a dangerous loss of control. In Paulina's account, maintaining a coherent self is a balancing act ('you may lose your balance, you know, in yourself') – there's a possibility that, without the safety net of our commitment to a truthful, unitary identity, we might fall permanently into another (untrue) version of ourselves. Identity formation online becomes a performance here, with the risk of the role taking control of the player, of the actor becoming the acted upon.

Personality split

In Charlie's narrative, loss of control takes the form almost of a Jekyll and Hyde type metamorphosis online.

sometimes you get in a tutorial you think 'o I don't think that should be said' cos you're like, 'what!' like you'll get shot down, whereas [online] you just type it in anyway, and press the button, 'cos it's not like you're actually saying it at all, so it's not you, it's like you're just a name, people won't attach it to, like, who you are, kind of thing. you can kinda say what you want and by the time you've hit send it's there, you can't take it back. I mean I've written things I've regretted before and and [the tutor's] said y'know 'careful now!' and I've thought 'I wish I hadn't said that now'! [laughs]. I don't know why I did it. I think people do generally just say things that they wouldn't normally say, they behave differently, even have opinions they wouldn't have in reality kind of thing.

[gap of 20 lines]

I mean it's not something I consciously do, like I'm 'yes! I can be a totally different person and you'll never know', it's not something you'd consciously do but maybe it's something which after I've written something I'd think 'o, would I actually say that in a tutorial', and more often than not the answer would be no.
Charlie

There is a tension in these extracts between Charlie's construction of himself as a careful, thoughtful student in the face to face classroom, and his expression of an online subjectivity which seems almost wholly adrift from his other, bodily present self ('it's not like you're actually saying it at all, so it's not you'). Again, the online self is described almost as having a kind of autonomy, making comments, expressing opinions and exhibiting behaviours which are at odds with the identity Charlie expresses in reflection on them. Charlie's narrating voice is interspersed by opposing voices – the warning voice of his tutor ("Careful now!"), the Jekyll voice of 'normal' Charlie ("O, I don't think that should be said", "I wish I hadn't said that now", "O, would I actually say that in a tutorial") and the out-of-control, Hyde version of himself which is described as emerging online whether he will or no ("Yes! I can be a totally different person and you'll never know!").

Deceit and perversion

In Paulina's account, the expression of an online persona is associated with deceit.

do you think, when you're talking in your online classroom, d'you think that you're the same you that you are when you're talking face to face?

well, I think so but, that's a difficult question. I don't know if you can ever tell when you're being really yourself or when you're kind of lying a bit. or it's not only lying, I mean I pretty much always try, I always try to be like myself. I'm the kind of person that believes I want to be myself all the time, or at least know what I'm doing, you know. But I think sometimes maybe the message comes across differently, you know I'm trying to say something and then the other person understands something else or thinks I'm a different person or something.
Paulina

This extract from Paulina's account first constructs only two ways of being online – 'being really yourself' or 'lying a bit' – as though in articulating an identity the individual might have access to a simple choice between truth and deceit. This response to the question is then qualified to acknowledge that the issue might not be so clear cut. Being herself might be more a case of 'at least knowing what I'm doing', of being able to maintain conscious awareness of

how or who she is. Moving even further away from her original conceptualisation, Paulina's account ends with the suggestion that, ultimately, her online identity is something which is not unilaterally formed, it's constructed socially, multilaterally, alongside those with whom she is communicating, to whom she is likely to appear as 'a different person'. Her narrative concludes with the idea that the construction of her online identity is not simply a matter of choice between truth to herself and a decision to deceive, it is something which lies outside her individual control.

A similar sense of the social formation of identity comes through in Richard's narrative, though here the sense of deceit is far more strongly formed and the online persona – in this case quite consciously constructed – is described as deviant to the extent of perversion.

I didn't switch gender, but I made myself about 20 odd years younger, and I was surprised by the ease with which you could kind of get away with that. it was also slightly disturbing as well, y'know well it felt very manipulative. I mean I remember there was, there was a Canadian girl started talking to me, and by that time I'd kind of toyed with this identity and it'd become, it very rapidly got established and other people started talking to me in that identity, and I just felt very uneasy about maintaining that identity cos I just felt it was very deceptive and it felt manipulative and I thought, 'I just want to get out of this'. but what I did learn from it is how how easy it would be to construct and get away with those identities, well get away with it, live within them if you like. in that case it felt uneasy kind of morally.

in what respect?

I dunno, it just felt a bit pervy I suppose.
Richard [2]

[2] This learner is describing his experience in an internet chat room, not in an online classroom. I suspect learning contexts in which it would be possible for students to consciously self construct to this extent are rare. Students may be aware of this, but still the popular image of the middle-aged man self-presenting as a child or a woman for deviant purposes can colour their perception of the identities of their online peers:
just not knowing who you're talking to, because you don't know who you're talking to. they could've said they're a girl but they could be a 50 year old man sort of thing. y'know, that's not going to happen in a university setting cos they've all got their university matric numbers and stuff, but the whole not knowing who you're speaking to thing, I can be really wary about that.
Alison

What comes through most strongly from the accounts summarised here is that there is a tension in students' narratives between the ideal of an embodied, authentic, anchoring self, the self that goes along to tutorial classes on a tuesday afternoon, and the possibility of other, deviant, less authentic selves which emerge online and which threaten the anchoring subject with the possibility of their autonomy. The possibility of the cyberspace classroom as a space where resistance and play can take place in the form of experimentation and protean interaction does not appear. Instead, in these accounts, it is a place where identity formation is fraught with anxiety.

Clearly it is not just online that we are troubled by the contradictions of multiple identities – this is a condition of our subjectivity. As Hall comments:

> Within us are contradictory identities, pulling in different directions, so that our identifications are continually being shifted about. If we feel that we have a unified identity from birth to death, it is only because we construct a comforting story or 'narrative of the self' about ourselves. (Hall, 1992: 170)

However it does seem as though, for these students, the medium disrupts the ease with which their narratives of the self are maintained. When shifted online, the 'comforting story' seems to gain a disquieting edge. To return to Lacan, we might see the feeling of unease which students experience when considering the possibility of their own multiplicity in terms of the ego's search for unity, the 'illusory ideal of completeness' (Sarup, 1992: 66). In Lacanian terms, the search for certainty, however successful a 'narrative of the self' it might generate, is ultimately:

> a form of self-deception, an alliance with the ego's imaginary identifications of wholeness and unity which vainly tries to master and end the restless movement of desire. (Usher and Edwards, 1994: 73)

To bring to bear the over-arching metaphor I am using in this paper – the two tapestries – it seems that when working online these students are caught

between the two worlds of Athene and Arachne. On the one hand, they are engaged in a medium which seems to offer looser boundaries, more space in which alternative subject positions might be articulated, somewhere where 'the restless movement of desire' perhaps has a freer rein. On the other hand, they are immersed in Athene's Cartesian world in which 'normal' is the centred, observing self and metamorphosis is a mark of deviance. In Arachne's world, 'desire, which is absolute, knows no law' (Lacan, 1977: 311). In Athene's, mutability is the punishment meted out to the lawless.

Constructing 'the teacher': tutors' narratives

Perhaps not surprisingly, tutors' narratives described a more 'knowing' perspective on online identity than the students' tended to, one which was more focused on the conscious control of their online persona.

so what's this persona like then, that you think you projected?

o I don't know. I think reasonably kind of [pause] yeah reasonably kind of formal teacher trying to kind of initiate dialogue, trying to kind of be supportive, trying to challenge them, [pause] trying to kind of point them in certain directions. trying to kind of share experiences, but experiences related to the subject. [pause] yeah very much as the kind of [gestures] 'tutor'.
Tom

In his account of the identity he constructed online, Tom takes almost a textbook list of the characteristics of a 'good teacher' – stimulating, supportive, challenging, guiding, informed – and describes himself as, quite consciously, stepping into them. The image is almost of the formal teacherly identity being strapped on like a suit of armour – Lacan's 'armour, donned at last' – and, in fact, the metaphor of teaching as a conflict does come up later in Tom's interview.

would you say you felt more comfortable teaching online than teaching face to face?

comfortable. [pause] comfortable in the sense that I felt more in control, or I feel more in control of my contributions. you know, you can think, there's a bit more space to think. I mean the classroom situation can be quite intense, it can be quite, you know, you're up there in the centre of things, and they immediately assume that you have more knowledge than they do in a particular area, which is probably not necessarily the

case. you're very much up there and yeah that can be quite stressful, it's the stressful part of teaching. and if you're not feeling too great or there are other things on your mind, so that you know, to give a really good teaching performance is I think an art in itself. and I think in the online situation, I think there's a bit more control, a bit more space.

so when you say you feel like you're in the centre in a face to face classroom, is that

well you are! you are! it's like, us against them! [laughs]

is that different online though, are you not in the centre online?

[pause] yeah, but I've got more control, I've got more control with what I say.
Tom

The key word for Tom here, used repeatedly, is 'control'. Where the students' accounts stressed a feeling of lack of control over an almost threateningly autonomous online self, the virtual learning environment provides for Tom the space and time to construct an identity which can provide a more effective, more thoughtful, more controlled 'teaching performance'. While the teacherly identity Tom described himself as stepping into (stimulating, supportive, guiding and so on) tends towards the student-centred model, the teacherly persona he describes acts very much as the centre of the classroom (the knowledgeable expert, 'up there in the centre of things'), both in its physical and virtual manifestations. In the 'us against them' conflict, Tom stands at the centre of the demanding, expectant mob of students. In the online classroom he is much less vulnerable, more in control, having had time to don his teacherly armour before entering the fray. Delia's account describes a similar, 'teacherly' construction of herself:

I think I'm more confident about being stern online than I am in face to face environments. I think I can sometimes project a much more confidently authoritarian self, or authoritative self as well, if I feel that students are missing the point, or that they are mis-reading what's being said. Then I think I do tend to be a little bit more forceful in the way in which I say, 'yes but you should be talking about *this*' or, ' yes, I realise that but I do know' sort of tone. 'you should listen to me a bit more carefully', that kind of thing.
Delia

For Delia the online classroom provides a space in which she can take up the subject position of the teacher as authority figure (both 'authoritative' and 'authoritarian'). In this extract her narrative voice is permeated by her

'teacherly' voices prescribing students' activities ("You should be talking about this") and asserting her own position as authority figure ("I do know"; "You should listen to me").

Delia's account seems to hint that the authority wielded by her online self is an improvement on her face to face teaching self, which is less confidently demanding of respect. Interestingly, her students' perceptions are almost completely opposite to her own:

I don't think you have respect for tutors on line, as you would in the tutorial groups. y'know, they're just other students, that are contributing. you don't really pay attention to what they say.
Charlie

face to face I think there's more respect given to her because she's there, you know? she's a lecturer and we do respect her. in FirstClass it's like it's a different person almost, because it's just a woman checking our comments and what we say.
Megan

It could be that Delia's voicing of herself as 'more confidently authoritarian' online is a response to the 'equalization phenomenon' experienced widely in computer mediated communication (Dubrovsky et al., 1991, Eldred and Hawisher, 1995) and referred to by her students. It is possible that the flattening of the teacher/student hierarchy which is taking place online causes Delia, in this account, to take up a more authoritative, 'teacherly' subject position in an attempt, conscious or otherwise, to reinstate a hierarchy which the medium tends to undermine. Diane's move toward a more authoritarian persona online was quite explicitly to do with the apparent erasure of her embodied self online:

ok, did you see yourself differently online? d'you think you expressed parts of your identity as an online tutor that you don't as a face to face tutor?

I think I was, I was probably trying to be more authoritarian online that I would be in a real time tutorial, because I think there's em, you you get authority in a real time tutorial for like even the way you sit. if you sit sort of like apart or because you're speaking up because you're at the board or whatever, em you get authority because of just that. em you come in later than them and you're carrying the books and like they know you're the tutor and that they're em they're there to get information from you or to pass information to you or whatever. but, in a an online tutorial em, it's probably more that, you have to assert, you have to find a way to assert authority. I don't think I did that very successfully.
Diane

In constructing a teaching self in the classroom, Diane depends on her embodied presence and her ability to wield the signifiers of teacherly authority – her posture and stance, her accessories (books, board), tone of voice, time of arrival. Without these, the assertion of authority must take place on completely different terms, terms that Diane felt she was not skilled in applying. For her, the tendency to voice a more bluntly authoritarian self online was related to this removal of her familiar teacherly 'props'.

Neither Delia's, Tom's nor Diane's accounts suggest the anxiety expressed in students' narratives of the online persona getting out of control, threatening the 'real' self with its autonomy. On the contrary, in the tutors' accounts the online classroom provides a space in which a controlled and controlling teacherly identity can be constructed. Mark's narrative tells a similar story, though there is here more unease about the way in which he constructed an authoritarian identity online:

well certain emails like I remember looking at them and thinking 'good god, I sound like a boring, stuffy old prig, "now classroom, please behave! pay attention! stop doing this"'. there's some of that, sometimes you know there were emails I sent out which, having thought about them, I was trying to present this, 'I am the teacher and you must listen to this because there are important issues here', which were very different from the way I would've presented if I was in class. so yeah there were two, there were different faces that were being presented.
Mark

This account is reminiscent of Charlie's 'Jekyll and Hyde' narrative – Mark's 'reflecting' voice looks back in dismay at the identity given voice online, that of the 'boring, stuffy old prig' issuing prescriptive instruction to his online class in a way which is at odds with the approach taken by his face to face teacherly self.

Despite this, what emerges most strongly from these accounts is the sense of tutors using the online space to construct themselves as authority figures, and of this construction being far less problematic, far less a cause of anxiety than the descriptions in identity narratives provided by students. There may be a certain

amount of disquietude, but there is no sense of guilt, danger, or deceit in these narratives of metamorphosis.

Conclusions

Online environments may create a space where the narratives of the self maintained face to face are more readily disrupted, but there is nothing deterministic about this. If the students' accounts revealed an edgy anxiety about their subjective multiplicity online which is at odds with tutors' more controlled construction of teacherly selves, it could be for a variety of pragmatic reasons: longer experience of online learning environments and the modes of selfhood involved in them among tutors; more familiarity with theories of multiple identity formation online among tutors; a less guarded approach in interview among students which increased the extent to which they were willing to give accounts of more anxiety-making identity issues; a tendency for tutors in designing programmes to choose the mode of delivery which suits them best, leading them to use online environments because these best suit their teaching style and mode of identity formation (it may not similarly match those of their learners).

I think, however, that above all these identity issues are an important strand in a tapestry which spreads further, one which incorporates all the contradictions and difficulties involved in the shift into the digital realm. The nature of the new learning cultures that might be fostered online is still, like Haraway's body boundaries, 'up for grabs'. However, if we see an instrumentalist culture operating in the delivery of online learning, it is perhaps less surprising that the online space becomes for teachers, however unwittingly, a place in which old hierarchies can be re-asserted and traditional, 'teacherly', authoritarian identities re-cast. The tensions described here perhaps result from new, online learning cultures emerging from within existing, hierarchical pedagogical frameworks, from the contest between the stable, ordered world of Athene and the decentred, cyborg world of Arachne.

My intention is not, in concluding, to tie the loose ends of the myth up with those of the narrative tensions generated by my interviews to create a tidy parcel. The tensions in the students' and teachers' narratives are, I think, reflected in rather than resolved by the metaphorical framework I have used. However I would like to return to the end of the story of Arachne, to consider its conclusion.

It appears at the end of this story that Athene, while losing the battle, wins the war. Arachne's tapestry is more finely crafted, but Athene's world view wins the day as Arachne herself suffers metamorphosis as punishment by being turned into a spider. However the ending, for me, is not quite so clear cut. What is apparently Arachne's punishment could also be seen as her reward in that by subjecting her to metamorphosis the goddess gives the mortal woman the gift of true mastery of her medium – the web, which now becomes her home. The spider is the weaver *par excellence*, and perhaps it is within these terms that we should consider our own inhabitation of the web, the digital realm. In our potential for mutability online perhaps lies the key to our comfort with, if not mastery of, the medium. Arachne's ending involves the embrace of shape-shifting, the taking up of a cyborg state. It gives a new resonance to Haraway's famous assertion of her preferred way of being – 'I would rather be a cyborg than a goddess'. (Haraway, 1991a: 181)

Chapter 4

Written in water: digital textualities

Introduction

When the poet John Keats lay dying in Rome in 1821, one of his final requests to his friend Joseph Severn was that his gravestone should be carved not with his name but simply with the phrase 'Here lies one whose name was writ in Water'.[1] In finalising the text for the epitaph, however, the poet's friends decided that 'insomuch as an epitaph must necessarily be considered as the act of the deceased's friends and not of the deceased himself'[2], the gravestone should read:

> This Grave contains all that was mortal, of a Young English Poet,
> who on his Death Bed, in the Bitterness of his heart, at the
> Malicious Power of his enemies, desired these words to be Engraven
> on his Tomb Stone: Here lies One Whose Name was writ in Water.

Such is the text as it can still be seen on Keats' grave in the English cemetery in Rome. The poet's friends later bitterly regretted their intervention in the epitaph, and with good reason. The poet himself understood the irony of the juxtaposition of the engraved, enduring memorial with the claim to anonymity expressed in terms of such transience. Keats himself was well aware of his own immortality as a poet.[3] He was also aware of the power of a metaphor which so perfectly expresses both the unsettling possibility of the great author's name dissolving into anonymity and the disturbing impossibility of inscription onto liquid. His friends, with minds perhaps less subtle and certainly grieving, could accept neither the irony nor the impossibility. In their response they themselves

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[1] Joseph Severn's letter to Charles Brown, 8 February 1821, in Cacciatore, V. (1973) *A room in Rome,* Rome: The Keats-Shelley Memorial Association.
[2] Charles Brown to Joseph Severn, 21 September 1821, in Cacciatore, V. (1973) *A room in Rome,* Rome: The Keats-Shelley Memorial Association.
[3] His claim that, 'I think I shall be among the English Poets after my death' is well known (John Keats to George and Georgiana Keats, October 25th, 1818, in Gittings, R. (ed.) (1970) *Letters of John Keats: a new selection,* Oxford: OUP).

unwittingly acknowledged the power of the metaphor – their claim to the text of the epitaph responds to the disquietude created by the vision of the pen writing in water, to the distressing injustice of the idea of the poet's name rendered invisible.

The story of Keats' grave seems to me to be a poignant introduction to the main themes both of this chapter and of chapter six, which consider the ways in which digital textuality and digital authorship affect students in cyberspace. The first of these themes relates to Keats' image of writing onto water – it is the troubling mutability or transience of digital text which Poster highlights when he claims that 'pages of digital text have the stability of liquid' (Poster, 2001a: 92). The second relates to the ironic claim to anonymity of the inscription desired by Keats – the, for many, disturbing spectre of authorial anonymity, of the problematising of the concept of authenticity as guaranteed by the name of the author. As this, and the later chapter will show, in the accounts of students and teachers the mutability of digital text and the play of authorial anonymity are resisted much as the metaphor of fluidity and anonymity was resisted by Keats' loyal friends.

In the previous chapter I suggested that the opportunities for exploring mutable and multiple identities online was resisted by students in favour of adherence to the ideal of the unified, embodied subject. Likewise, this chapter and chapter six argue that the 'play' of digital text and the possibilities of new forms of authorship are resisted by students in favour of the ideal, stable, printed text and the known and knowable author. Again, I suggest that this 'doubled' relation to digital textuality – the glimpsing of the possibilities of the new forms of textuality and the concurrent resistance to these forms – is related to the instrumental way in which digital texts are often used in online learning contexts.

In the first section of this chapter I will focus on the themes of stability and fluidity by looking at aspects of the relationship between digital text and printed

text. I will consider the effects of the new medium on modes of thought and of subjectivity, and touch on the university's relationship with the codex book as the symbol of legitimate knowledge. I then move on to consider interview narratives which show that, in the contexts of online learning, students and tutors look to the printed page as something materially and metaphorically 'graspable', an apparently stable entity imbued with an authenticity which contrasts with the unsettling mutability of digital text.

Print stability and online mutability

Metamorphosis and mutability characterise digital text. The Ovidian metaphor applied to the themes of identity and subjectivity in the previous chapter has been applied by others (Brown, 2000, Rhodes and Sawday, 2000) to describe the digitisation of textual artefacts:

> Digitisation both desubstantiates a work of art and subjects it to perpetual immanent metamorphosis from one sense-dimension to another. I keep returning to 'Ovidian' as the adjective to describe its force, since such formal metamorphosis constituted Ovid's great epic subject. (Lanham, 1993: 11)

3. René Magritte's *La Lectrice Soumise*, 1928

For Lanham, writing before the use of the world wide web became widespread, the 'perpetual immanent metamorphosis' of digital text is experienced largely through word processing. Even in its un-networked state, text digitised and 'liberated' from the printed page is a volatile substance. It can be cut, pasted, scaled up or down, presented in different font faces and font styles, and easily illustrated with digitised sounds, animation and images which themselves are infinitely manipulable.

According to Lanham, such capacity effects a radical change in the way we view text. The printed page has been naturalised over centuries to the point where it is no longer seen as a technology. It has become invisible in the sense that its material aesthetics are generally subordinated to its ability to function as 'a transparent window into conceptual thought' (Lanham, 1993: 4). Lanham quotes the book designer Beatrice Warde's assertion that the printed page 'should stand to its thought as a fine crystal goblet stands to the wine it contains...the best style is the style not noticed' (4).[4] In Hayles' terms (Hayles, 1999), print is naturalised to the extent that we see the information it 'contains' as being separable from its material instantiation. Digitisation materially problematises this ideal of transparency. Post-digitisation, the 'textual surface becomes a malleable and self-conscious one'. We no longer simply look *through* text to its meaning, we also look *at* it (Lanham, 1993: 5). Its volatile materiality becomes an issue as we come to see its 'creation and production as inextricably entwined' (Hayles, 2002: 373).

The printed page is stable in time and space. As Poster puts it:

> This page is here and now. One must physically move it to displace it or one must displace oneself to approach it. The page is an object in the world, obstinately enduring from moment to moment, subsisting in a place through the laws of inertia. Even if there exist multiple copies of the page, each one is subject to the identical conditions of material embodiment. (Poster, 2001a: 92)

The digital text, however – 'mobile and changeable' – can be 'moved around the world in an instant'. A digital text is 'everywhere at once, so long as the appropriate technical conditions apply' (92). According to Poster, however,

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[4] There are print works which challenge the ideal of transparency with their use of image and typography. In literature, the work of Alasdair Gray ((1981) *Lanark,* Edinburgh: Canongate, and (1984) *1982 Janine,* London: Cape) stands out as an example, alongside those graphic novelists – Chris Ware ((2001) *Jimmy Corrigan: the smartest kid on earth,* London: Cape) and Daniel Clowes ((2000) *Ghost world,* London: Cape) for example – who have gained critical 'respectability'. Certain scholarly works – Derrida's *Glas* ((1976a) *Glas,* Paris: Editions Galilee), Barthes' *S/Z* ((1974) *S/Z,* Miller, R., New York: Hill & Wang) – also use typography to problematise the transparency of the printed text. However, such exceptions still to a large extent prove the rule.

such 'temporal instantaneity' is not in itself revolutionary. It is the spatial instability highlighted by Lanham – the ability to alter the material arrangement of the text – which makes the digital text fundamentally different from the 'analogue' or print text (92).

Once networked, the digital text is not only subject to the typographical play that Lanham describes. It can also be formatted as hypertext, linkable at an instant to any other text on the network (such links are themselves volatile – every web user has experienced the frustrations of 'This page is no longer available'). The networked text opens itself up to intervention and alteration by a global readership, either intentionally through the embedding of instruments for collaboration, subversively through hacking and copying or mundanely through the variation and configurability of readers' browsers. The spatial configuration of digital text is not subject to control by author or publisher. Such texts are impossible to pin down without reverting them to their analogue form by printing them out.

The inscription securely embedded in the printed page is therefore in contrast with the volatile, malleable text which shifts across the surface of our screens and throughout our networks. Where we read things *in* books and journals, we read them *on* the internet and the web. Print privileges the terms of *stability* and *depth*, where *fluidity* and *surface* belong to the digital. Within the context of learning, there is an implication here for the classic depth/surface binary (Marton et al., 1984/1997) dominant in theories of learning (discussed below). The shift in the materiality of language – what Poster calls the 'wrappings of language' (Poster, 2001b) – is, however, important in a broader sense in that shifting textual formations forge change both in our modes of thought and in the ways in which we are constituted as subjects. It is this fundamental *difference* which is often overlooked when learning moves online.

The difficulty of working with the difference of digital text is, in a sense, almost inevitable given that we are operating in what Bolter describes as the 'late age

of print' (Bolter, 2001). Much as early cars were designed as horseless carriages, and early printed books constructed to look like manuscript codices, it is hard for us to think outside the conventions and metaphors applying to printed text:

> In this late age of print…writers and readers still often conceive of text as located in the space of a printed book, and they conceive of the electronic writing space as a refashioning of the older space of print. (13)

McLuhan's perspective on the earlier technological shift from print to broadcast media is still resonant in this context:

> Our official culture is striving to force the new media to do the work of the old. These are difficult times because we are witnessing a clash of cataclysmic proportions between two great technologies. We approach the new with the psychological conditioning and sensory responses of the old. (McLuhan and Fiore, 1967: 42)

'Difficult times' indeed within the context of online learning. If we fail to engage with the challenge of the digital, neglecting its broader cultural implications in favour of what are primarily instrumental approaches to delivering learning online, we neglect a new and potentially rich pedagogic space. As this chapter will suggest, instrumentality in 'e-learning' – operating within the 'old' print paradigm – works to construct digital texts as inauthentic, to cast the new modes of authorship online as threatening, and therefore to contribute to the constitution of learning and teaching subjects who are likely to be resistant from the outset to the project of learning in cyberspace. I do not take the view that print is a bad old medium and digital text represents the bright new future which will, of necessity, supersede the old world of print. On the contrary, printed texts are and will remain important. My point is rather that online learning involves an engagement with qualitatively different textualities, which bring about in readers a different way of learning and of being. Discourses, practices and modes of identity formation are all reformulated in cyberspace, and if online learning aspires to be anything other than an

impoverished, 'second-best' option it must work with, rather than against, these new modes.

I will introduce these themes by expanding on my claim that changes in the material basis of language have important effects on the way in which we think, and the ways in which we are constituted as subjects – in particular as scholarly subjects embedded within institutions of higher learning.

Media, mind and the scholarly subject

Written and printed text

> If the technology of writing has been traditionally regarded as the creation of the human mind, possibly its greatest creation, we could also argue in the other direction: that the mind is the creation of writing. (Bolter, 2001: 194)

Ong's project in *Orality and Literacy* is to show how modes of thought are transformed by technologies of writing:

> Without writing, the literate mind would not and could not think as it does, not only when engaged in writing but normally even when it is composing its thoughts in oral form. More than any other single invention, writing has transformed human consciousness. (Ong, 1982: 78)

The analytic, the linear, the abstract, the objective characteristics of Western thought are all, for Ong, 'structured by the technology of writing' (40):

> an oral culture simply does not deal in such items as geometrical figures, abstract categorization, formally logical reasoning processes, definitions, or even comprehensive descriptions, or articulated self-analysis, all of which derive not simply from thought itself but from text-formed thought. (55)

For Ong, the emergence of print had additional effects on the 'mentality' of the West: the preoccupation with 'correctness' in language manifested in the

publication of exhaustive dictionaries; the emergence of reading as a private rather than a group occupation and the resultant importance of personal space; a sense of the private ownership of words and the emergence of plagiarism as a crime against 'originality'. Above all, print encourages the sense of finality, of completeness, of 'closure' which has been so challenged by literary theory of the last half century. The printed book – neatly margined, justified, bound – is the material manifestation of the author's final word. As Ong says:

> Print is curiously intolerant of physical incompleteness. It can convey the impression, unintentionally and subtly, but very really, that the material the text deals with is similarly complete or self-consistent. (133)

To print the text is to finalise it. We may engage conceptually with the idea of the Derridean trace and the endless play of signification but, in scholarly contexts particularly, it is still the printed textual artefact with its linear, logical, analytical 'final word' which carries weight – the textbook, the monograph, the printed journal article, the thesis bound and registered with the British Library.

The McLuhanesque notion of writing as constituting the linear, logical mind (McLuhan, 1962) is expanded on by Flusser:

> The first examination of writing reveals that the line, the linear sequence of the character, is its most impressive aspect. Writing appears here as the expression of a one-dimensional thinking, and thus also of a one dimensional way of feeling, willing, evaluating, and acting... Writing, this linear stringing together of signs, actually made possible for the first time a historical consciousness. Only if one writes in lines can one think logically, calculate, criticize, pursue science, philosophize – and act accordingly. (Flusser, 1992: 11-12 quoted in Poster, 2001a: 85)

Writing, and its manifestation in print, comes to be associated with Cartesian subjectivity (Bolter, 1991, Bolter, 2001), with the view of the reading subject as an autonomous, reasoning agent.

> The material character of print as disembodied signs, stable on the page, open to visual reception, and generally received in isolated circumstances all nurtured the growth of critical, cognitive functions and a cultural identity priding itself on these traits. (Poster, 2001a: 13)

The printed object in this view works towards the construction of its other – the reading, interiorised human subject. It is important to stress at this point that this relation between print and the Cartesian subject is one of association rather than simple determination. Such an association should be seen not as one of the 'inevitable historical consequences of the invention of printing', but rather as 'the cumulative result of particular social and political choices made by given societies at given moments' (Hesse, 1996: 21). 'Writing technologies' as Bolter reminds us 'do not determine how we think or how we define ourselves. Rather, they participate in our ongoing cultural redefinitions of self, knowledge, and experience' (Bolter, 2001: 189).

This relation between the printed object and reading subject is constituted via its embeddedness throughout our institutions and social practices – university, church, bureaucracy, legal system. Within the learning context, it is this very embeddedness – the historical, cultural and institutional threads tying us into a particular way of experiencing ourselves as subjects – which makes the transition, or even partial transition, from a print to a digital paradigm problematic. As Bolter reveals:

> [the] construction of writing as a process of analytical reflection carries with it a definition of the human mind, and it leads to a definition of human identity by suggesting that what is important about us is our capacity for reasoned discourse, expressed in writing. (Bolter, 2001: 193)

Nowhere is this truer than in the university, where a student's success is determined by his or her ability to demonstrate intelligence through analysis expressed in written form in essays and exam scripts, and where the worth of academic staff is still to a large extent measured by published (i.e. printed) output. Throughout the university writing, captured in its print form, is still the

primary marker of academic legitimacy. The linear, logically-developing scholarly text, with its hierarchical structure laid bare in the form of its contents page, is still the primary expression of the academic mind:

> [The] need to establish a hierarchy and to direct the reader is more than a matter of style: it still defines the professional activity of academic writers. All scholarly research is expected to culminate in writing. The historian or scholar does research not for its own sake, but in order to have something to write, and the same can be said of many of the social and even the hard sciences. In order to be taken seriously, both scholarly and scientific writing must be nonfiction in a hierarchical-linear form. (Bolter, 2001: 105)

As Lanham comments, in academia 'all our arguments build toward a conclusion. We find scholarly disputation unthinkable without one' (Lanham, 1993: 125).

If hierarchical-linearity and the build towards conclusion is central to scholarly writing, so too is the ideal of textual stability. We can see the fixity of the word as being symbolised by its material embodiment in the printed book, but in fact the importance of the stable text to academia pre-dates printing. Eisenstein relates how, 'when lecturing was linked to dictating and students served as scribes', universities would levy fines on professors who departed from the given text by altering passages or including commentary of their own (Eisenstein, 1980: 524), while Lebvre and Martin relate the 'ingenious' strategies undertaken by universities to limit textual drift in manuscript reproduction:

> Manuscripts were loaned which had been carefully checked and revised. From them copies could be made and charged for according to a fixed tariff or 'tax'. The original text (the 'exemplar') was returned to the stationer after copying, and he could hire it out again. This method prevented the corruption of the text, which could otherwise become worse with every copy made, since by this method each copy was made from the same original. (Lebvre and Martin, 1976: 21)

It was, however, the printed text – the possibility of the production of multiple, identical copies available to readers distributed in time and space – which enabled the emergence of modern scholarship:

> The new, capital-intensive print technology of the early sixteenth century was able to produce almost flawless replicas of a given text over and over again. At once, the symbolic power of the book is redefined. Comprehending the book as an intellectual tool rather than as a devotional object or as the badge of luxury, was a direct result of Gutenberg, whilst the creation of a community or network of scholars throughout Europe was equally a phenomenon associated with the arrival of print. The beguiling myth of the impoverished scholar, sustained by membership of an invisible community of the mind, could only have emerged once books were more widely available. (Rhodes and Sawday, 2000: 4)

The printed book thus both creates and constitutes the modern academic. In the humanities, the liberation of scholars from the work of preserving texts in the form of fragile manuscripts enabled the development of new ideas about the task of scholarship and criticism (Landow, 1997: 21) while, as Eisenstein has shown, it was also central in mapping the terrain of the modern scientist (Eisenstein, 1980: 520-574). The printed book also liberated students from their teachers. It was no longer necessary for them to 'sit at the feet of a given master' in order to learn – academic mastery was available to them on their own terms, via the printed text (Eisenstein, 1980: 66). It also, in theory, liberated them from the drudgery of the medieval lecture in which they played the role of copyist to the lecturer's dictation from the accepted text (Eisenstein, 1980: 524). (This final point should perhaps be stated only ironically since, after centuries of print and now decades of instantly distributable electronic text, dictation accompanied by frantic note-taking is still a dominant mode of teaching in many institutions of higher education.)[5]

[5] Equally bizarre in its lingering medieval-ness is the common practice of 'paper presentation' at academic conferences when the visual-oral collective space is forced into the linear-textual imaginary by the presenter reading aloud from his or her printed work.

Printed text, as the stable embodiment of the workings of the reasoning mind, functions as the dominant marker of intelligence and ability in higher education, even within disciplines primarily concerned with the visual. It is not surprising therefore that the codex book – symbolising the material embodiment of legitimate knowledge in the form of the stable, linear text – still sits at the heart of the university both physically, in the form of the library, and symbolically. It is interesting to see how the crests and logos of countless academic institutions repeatedly show the codex sitting at the very heart of the university's symbolic representation of itself:

University of Oxford

Princeton University

Queen Margaret University College

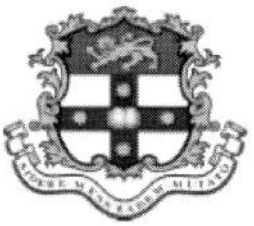
University of Bristol

University of Edinburgh

University of Toronto

University of Sheffield

University of St Andrew's



University of Sydney

4. University crests

Digital text

Printed text holds therefore almost a talismanic status within the university, acting as a symbolic anchor, as a physically and metaphorically graspable embodiment of academic knowledge. It is also one of the primary means by which our identities as academics are defined and constituted. What then are the consequences for academic discourse, practice and subjectivity when text 'goes digital'?

As the previous section argued, text as embodied in printed artefacts represents material and – by association – semiotic completeness, closure and stability. Furthermore, the academic book, journal article and essay tend almost always to be presented in terms of a hierarchical-linear logic defined by the print medium – this thesis being a case in point. Digital text, by contrast, is highly volatile in its material manifestations, as we have seen. It is extremely mobile, able via the internet to be simultaneously present at numerous points globally. When networked, it resists closure to the extent that the number of potential and material connections it bears within itself are as vast as the web itself. It is open to alteration by a global readership, placing into question the print ideal of completeness and finality as described by Ong. It also, particularly in the case of hypertext, reformulates and restructures hierarchy and linearity.

Books are technology too, as the first generation of hypertext theorists reminded us (Bolter, 1991, Landow, 1997, Bolter, 2001) but digital texts, as Poster points out, are 'subject to a material regime fundamentally different from analogue texts' (Poster, 2001a: 93). In its digital form language shifts to 'the microworld of electrons', translated into a series of zeros and ones which can be cast into a 'minimal physical trace such as a pulse or an electron'; in this sense electronic text moves within an 'imperceptible dimension' (82) impossible to grasp in the way we can grasp a page of print. To be usable, digital text must be heavily mediated since it is:

> not directly accessible to either the writer or the reader… In the electronic medium several layers of sophisticated technology must

> intervene between the writer or reader and the coded text. There are so many levels of deferral that the reader or writer is hard put to identify the text at all: is it on the screen, in the transistor memory, or on the disk? (Bolter, 1991 quoted in Landow, 1997: 22)

In linguistic terms, as Hayles reveals, these characteristics of digital text represent a fundamental shift in the relation between signified and signifier (Hayles, 1999). Information technologies create what she calls *flickering signifiers*, which are 'characterized by their tendency toward unexpected metamorphoses, attenuations, and dispersions' (30). Flickering signification and textual mutability are the product of heavy mediation, of the long chains of coding on which electronic text depends:

> In informatics, the signifier can no longer be understood as a single marker, for example an ink mark on a page. Rather it exists as a flexible chain of markers bound together by the arbitrary relations specified by the relevant codes. As I write these words on my computer, I see the lights on the video screen, but for the computer, the relevant signifiers are electronic polarities on disks. Intervening between what I see and what the computer reads are the machine code that correlates alphanumeric symbols with binary digits, the compiler language that correlates these symbols with higher-level instructions determining how the symbols are to be manipulated, the processing programme that mediates between these instructions and the commands I give the computer, and so forth. (31)

Such mediation makes machine text both highly manipulable and highly unstable. For the reading subject, it also involves engagement with a potentially disturbing new mode of experiencing selfhood, since a change in the mode of signification can never stand alone as a cultural phenomenon:

> Different technologies of text production suggest different models of signification; changes in signification are linked with shifts in consumption; shifting patterns of consumption initiate new experiences of embodiment; and embodied experience interacts with codes of representation to generate new kinds of textual worlds. (28)

That such changes in the material configuration of text present issues of pressing importance to academia is in little doubt. I have already referred, in the introduction to this thesis, to Stone's comment:

> We no longer live in a world in which information conserves itself primarily in textual objects called books…but inescapably, at the threshold of a new and unsettling age [in which we must] reimagine the scholarly enterprise. (Stone, 1995: 177-78)

As the multiple, anonymous authors of the hypertext 'This is a test' (the introductory piece to the online journal *Culture Machine*) claim, the changes in the material basis of text do not simply require that we have a discussion about how the new forms might best be used for teaching, research and publishing – they are also about redefining the very nature of academic knowledge and its legitimation:

> what is so interesting about new technology is not just the extensions and improvements it offers to existing practices of scholarly research [HTL to Scholarship] and publication [HTL to Publishing]; nor the way it expands the field of academic knowledge, so that Digital Communications, Electronic Publishing, Multi-media, Animation, Visualisation, Virtual Reality, Cyberspace, The Internet, etc. can now all take their place in the university alongside the other areas of 'legitimate' [HTL to Legitimacy] teaching and research; but the challenge this technology presents to the academy's very mode of legitimation… new technologies not only change the process of analysing, communicating, exchanging, classifying, stocking and conserving academic knowledge, they change the very nature of that knowledge. (anonymous, 1999)

The implications of digital text for authorship, publication and pedagogy – the ways in which it might challenge traditional ideas about originality, plagiarism and collaboration, and enable new articulations of power between teacher and learner – are explored at various points throughout this thesis. My concern here is the way in which, in learning contexts, a shift away from the stable printed text to the volatile, mutable digital text – the text metaphorically 'written in water' – might affect the way in which we are constituted as subjects via academic discourses and practices. For Poster, this is the key issue:

> what is at stake are new language formations that alter significantly the network of social relations, that restructure those relations and the subjects they constitute. (Poster, 2001b: 9)

Poster identifies three stages in what he calls the 'mode of information', each of which can be applied in terms of their impact on the ways in which such relations are structured within the academy. These are 'face to face, orally mediated exchange; written exchanges mediated by print; and electronically mediated exchange':

> In the first, oral stage the self is constituted as a position of enunciation through its embeddedness in a totality of face to face relations. In the second, print stage the self is constructed as an agent centered in rational/imaginary autonomy. In the third, electronic stage the self is decentered, dispersed, and multiplied in continuous instability. (Poster, 2001b: 6-7)

Poster stresses that these stages are not simply progressive. With regard to learning and teaching, I suggest that they function in two ways. First, diachronically as a description of the historical changes in the dominant modes of delivery in the West, from classical Greece to the present time – a transitional one in which print and electronic modes are still in a state of tension with each other. They also operate synchronically in the sense that all three modes of exchange – oral, print and electronic – are widely practised at this present moment in UK higher education. Though, as I have contended, print is the dominant mode formally and symbolically, the oral mode is also naturalised in learning contexts. For students and teachers, it is the implications for subjectivity and knowledge construction of the third, electronic stage which are unsettling. This chapter looks at the conflicts emerging from the negotiations between print and electronic modes in online learning.

Resistance to the implications for knowledge and subjectivity of digital text is manifested throughout the academy. It is seen in the reluctance of many academic and administrative staff to see beyond the simply instrumentalist,

managerialist uses of learning technology to their potential for the exploration of radical new pedagogies. It is seen in the way status indicators, funding systems and assessment strategies privilege the individual academic 'voice', primarily as it is expressed in linear-hierarchical print form. It is seen in the way in which we conceive of such academic touchstones as 'originality' and 'legitimacy'. It is even seen in the way in which virtual learning environments present materials and learning opportunities structured according to the logic of print. Finally, as the next section will show, it is seen in the way students and teachers speak of print text in relation to its protean Other.

Perhaps this is not surprising given that, if we agree with the poststructuralist view, what is at stake is not simply our way of perceiving the academic task – the ways in which we operate on it from external positions of individual autonomy – but the very way in which we are constituted as subjects within the academy. Where print is associated with the Cartesian model of the autonomous, rational self, the digital points us towards a fragmented, distributed subjectivity which belongs to the postmodern:

> the Internet transgresses the limits of the print and broadcast models by (1) enabling many-to-many communications; (2) enabling the simultaneous reception, alteration, and redistribution of cultural objects; (3) dislocating communicative action from the posts of the nation, from the territorialized spatial relations of modernity; (4) providing instantaneous global contact; and (5) inserting the modern/late modern subject into an information machine apparatus that is networked. The result is a more completely postmodern subject or, better, a self that is no longer a subject since it no longer subtends the world as if from outside but operates within a machine apparatus as a point in a circuit. (Poster, 2001a: 16)

In terms of the allegory I used in the previous chapter, print situates us in Athene's world of stable embodiment, clear hierarchy and reasoning autonomy, while the digital casts us into Arachne's tapestry where we become immersed in an imaginary characterised by metamorphosis, desire and boundary transgression.

In simple material terms, the shift from page to screen involves a discomforting disappearance of stability:

> The material *delimitedness* of the book as receptacle…gives way to an *unlimitedness*, which puts the text closer to the indefinite than to the infinite… With the loss of the page's spatiality and the palpable rigidity of the folio volume, a comforting landmark disappears, and a new era opens up that is also an area of volatility and instantaneousness which will doubtlessly not have only advantages. [original italics] (Debray, 1996: 147)

In turning to the stories students told about the ways in which they engage with online texts for learning, I will show how their accounts resonate with the tension of negotiating this contrast between the delimitedness of print and the unlimitedness of digital text.

'Graspability': students' accounts

it's like, well it's quite strange because y'know it is this vast space of just, it's it's not even words, it's just sort of [pause] gigabytes and megabytes and all that, but just at the same time you're seeing it through a very small screen. so I I find that quite hard to sort of grasp, this vastness in this little box that's sitting on top of your desk. I I just [pause] you don't, you know that all that information's out there but what I ever use is just so small, you don't think about the millions and millions and millions of things that there is. if that makes sense!
Alison

The vast unknowability of this 'microworld of electrons' (Poster, 2001a: 82), the 'millions and millions and millions of things that there is' which – for Alison – must both be thought about and not thought about provide a vivid picture of the kind of digital imaginary which students grapple with when they engage with text online. In this section I will offer extracts from students' own stories, looking at how they describe themselves as engaging with this digital world. It is an engagement largely expressed in terms of an awkward negotiation between the digital and print realms, where the volatility of digital text is almost always resisted in favour of the 'graspability' of print.

I should stress at this point that my aim in discussing students' and, later, tutors' accounts is not to suggest that they are somehow 'wrong' in their privileging of the print over the digital mode. My interest is rather to explore why this might be the case by looking at the terms, metaphors and allusions used in their narratives. In general, I agree with the majority who find large amounts of text difficult and uncomfortable to read on screen. Such text is not designed to be consumed in its digital form. I explore these interviewees' accounts from within a perspective which is interested in how new scholarly and pedagogical forms might emerge which work with, rather than against, the particularities and strengths of digital media.

Possession

yes, ok, so if you had to choose a medium you felt happiest learning from, what would it be?

paper.

why?

probably because I'm most familiar with it because I'm so old. it's how I've always learned. because I think of it as the common denominator, so even if I I was using the web I would print it out. its just with paper you can always go back to it, you know where you are with it. in terms of actually looking at a lot of information on the web, you'd print it out anyway cos you can't really get a grip of the structure of it unless you actually see it. you can visualise it more.

can't you go back to stuff on the web?

well you can do, but you can't really get the shape of it, you can't scan it as easily as you can when it's printed because you've got other issues like robustness, you're reading something and then it crashes or you're reading it and you want to highlight something, I know it's possible to do that but it's harder. and also you can use it in all sorts of different situations, you can access it at base.
Sue

Sue's account is typical among students in its expression of the impossibility of 'grasping' the digital text. Every single interviewee bar one – whose account is presented in the coda to this chapter – responded to text on the internet by hitting the print button. For Sue, paper operates as a stable locator; the mutability of digital text is contrasted with the spatial reliability of the page of print that 'you can always go back to'. The page of print offers an anchor for the

reading subject, 'you know where you are with it'. The slippery, amorphous quality of the digital is contrasted, in this account, with the relative ease of comprehending the spatial reality – 'the shape' – of the text when it is printed out. For Sue, the relation between electronic and print text is expressed in terms of visibility or invisibility – 'you can't really get a grip of the structure of it unless you actually see it' – as though when using online text you are almost looking at it *without* seeing it. The volatility of the digital medium – its lack of 'robustness', its tendency to crash – is opposed here to the metaphorical groundedness of print, which can be accessed 'at base'.

Sue suggests that her preference for print is due to her age (mid forties), but it is in fact a preference very much shared with younger learners.

how how is reading a web page different from say reading a book or a paper?

I dunno cos, a web page, you can like eh scroll down a bit, but I don't know I just find it easier to print it off and like go through the things, highlight what I think's important. like the book, like you've got it there in print and you can highlight it, and I just think y'know that's a lot easier than like going through it with like the thing cos like if it's late at night you're at the computer and your eyes are going you can like miss it it's so easy to misread something in this quote and misref, like not reference it properly and then that's you in trouble for your exams and it's just like 'ok I should've just printed that off' ah so.

ok so it's just easier to read

yeah

if it's from a printout

yeah cos like you might read it in your bed, you can read it like any time but to read a web page you have to be at the computer.

yeah, ok, so if you had to choose a single medium to learn from what would it be?

mmm, probably [pause] probably books cos like again you can reference it, you can you can get like a good, you can reference it with like your bibliography, you can highlight it, you can underline it, but, you can always like print off stuff from the web site for it, as well so it's just like both. I just feel so much easier having something printed out there, that's like mine to do what I want with it, and then I can chuck it in the bin once the essay's in! [laughs] you can do the sigh of relief, it's just ah!
Daisy

Daisy highlights here, as do many of the students' accounts, the physical discomfort involved in reading from a screen. Her preference for print also

circles around a concern with referencing convention – print text has a security in its position within academic modes of legitimation which, for Daisy, digital text does not share. Referencing a text is a way of pinning it down. Daisy's doubt about legitimation, combined with the possibility of error resulting from the physical difficulty of reading from a screen, threatens a slide into failure as a student – 'that's you in trouble for your exams'.

The inflexibility of the digital is expressed in terms of the most pervasive cliché in discourses of resistance to electronic text (Bolter, 1991, Bolter, 2001) – you can't take it to bed with you. This almost fetishistic vision of intimacy with the printed page suggests a kind of possession which is impossible with the more mediated modes of access to digital text. This image of, or desire for, possession of the printed page is the most striking thing about this excerpt from my interview with Daisy; when she says 'I just feel so much easier having something printed out there, that's like mine to do what I want with', she is suggesting the possibility with the print form of *having*, of grasping or owning, the text. By implication, this is something which cannot happen online. As Hayles reveals, the infinite and instant replicability of digital text means that it is access, not possession, which structures our relation to it (Hayles, 1999), yet it is the logic of possession within which most of the students I spoke to were operating.

The printed page for Daisy becomes a metaphor for the task of essay production. The finitude of the page represents the delimitedness of the task, so that when the latter is finished, the former can be cast away – 'you can do the sigh of relief, it's just ah!'. The implication is that the digital text can never be cast off in quite the same way. Perhaps it lurks in the hard disk or on the network, never fully present and never wholly absent, representing the disturbing possibility of the task of the digital reader-essay writer being never quite complete.

'Physically speaking'

well, I think when you're reading the internet, physically speaking the way you're sitting, and reading the computer you're um you're facing the monitor and just by the simple fact that the monitor, that the reflection, say if you have certain lighting, um you'll get a reflection back that'll hurt your eyes, you can't be on the computer too long cos you obviously you'll get a headache, versus if you're reading from a paper you can just take your time about it, you're on the internet, you know you're on the internet, you're wasting time, you're sitting there, whereas with a book you can just get up and walk away with it, come back to it later. take it with you for that matter, whereas you know on the internet you can't do that, you sit there, you read. once you're done you're done, if you're not done you can come back to it later but you gotta come back, back to the computer, you may lose it, you may lose that page if you don't write it down, so it can be a hassle.

mm, that's interesting though cos what you, you're identifying problems with reading on the internet but at the same time you're saying that you'd choose the internet as your ideal learning tool.

no, I would, I'd print, that's what printers are for! print them off, you've got your web page there, you can sit with them, you can take them wherever you go, it's handy. that's what I do. I print it out. I can't sit there and highlight the screen you know! [laughs]
Nancy

Nancy's account is similar to Daisy's in its focus on physical possession of the text, here strikingly expressed in terms of bodily movement. The computer is constructed as an uncomfortable, headache-inducing physical environment in which access to the text involves the restriction of physical movement – 'you're sitting', 'you're facing the monitor', 'you know you're on the internet, you're wasting time, you're sitting there', 'you sit there, you read'. To return to the text is to return to the computer – 'you gotta come back, back to the computer' – and even then the volatile nature of internet textuality may well mean that the text is lost. By contrast, the printed page offers a combination of stability, continuity and physical freedom – 'with a book you can just get up and walk away with it', you can 'take it with you'. Printed text has a physical, material presence which enables freedom for the embodied learner, while digital text – mutable, volatile – inhabits the alien, heavily-mediated environment of the screen. To use it involves the acceptance of bodily restriction. With digital texts 'you sit there', with printed texts 'you can take them wherever you go'.

Two windows

it's not something I enjoy, I like or would advise at all if they had a choice, I'd totally eradicate it but well I don't expect so but! [laughs] you just have to kind of go with it but I mean if there was a choice between reading from a screen and reading from a book I would go for the book every single time. I mean I don't like reading books but em you would always just get a lot more, you can't read properly on the screen, y'know the screen flickers, you only get like half the information you don't take it in. there's always the feeling if you're reading something from the screen that you want to get it finished as soon as possible so you don't have to look at it any more. so. uh I don't think it's real. it's very unreal, very fake. not for me. I'm sure some people like it [laughs].

[gap of 150 lines]

all I'd say, I'd much, if I had to learn something I'd much rather eh travel up to [name of university campus] and go to the [library] and sit and like sit by a window and like read, than y'know go to a computer, even if it was in the room, and go on the internet, even though it'd be so much easier just the whole y'know, you just wouldn't, you wouldn't be taking it in, you'd almost resent what you were learning, whereas if you've got quite a nice environment to do it in, and a real environment, y'know not just a computer screen, like you take more in.
Charlie

Charlie, like Nancy and Daisy, refers to the physical discomfort of reading from the screen, aligning it with the difficulty of absorbing textual information in its digital form. Empirical research supports his suggestion that 'you only get like half the information' from screen text when compared with print text – one report suggests a decline in reading performance of 40% or more (Lee, 1996). While such research buys into the questionable logic that information is separable from its material form – making straightforward comparisons between print and digital text possible – it is clearly the case that reading large amounts of text on screen can be physically uncomfortable and cognitively difficult. However what is most interesting in the accounts of the students given here is the terms within which they speak of digital text, and the metaphors they apply in comparing it to its printed form. Charlie's account is striking for its extreme resistance to computer mediated learning – 'I'd totally eradicate it', 'you'd almost resent what you were learning' – but also for its alignment of screen-mediated text with the 'unreal' and the 'fake'. The material instability of the signifier – 'the screen flickers' – places the digital text in the realm of the inauthentic. By juxtaposing the two possible reading positions – by the library window or positioned in front of the window of the screen – Charlie's account nicely contrasts the serene view on a knowable material 'reality' of the one with

the confrontation with a highly mediated 'fake'-ness and unreality of the other. Lanham's contrasted modes of looking *through* print as opposed to looking *at* the digital text (Lanham, 1993) are brought to mind, expressed here by Charlie in terms of the impoverishment of the latter.

'Real' scholarship: tutors' perspectives

When I asked tutors about their own scholarship and its mediation through digital text my questions generated accounts similar to those of the students. They too privileged the printed text, aligning the digital with the inauthentic and the impoverishment of the reading experience.

Addiction

uh, I'm not actually that fond of using the web myself.

really, why?

I use it for, for example I was on the web earlier on to try to locate a professor in the States who I'd done some work for and I couldn't remember which university he was at, so I find it very useful for that from that point of view. I contacted another professor today concerning a journal paper through the web, finding his email address, that kind of thing. um sometimes I'll track down learning and teaching materials, and research materials on the web. but I'm not one of these addicts who'll go into the web and spend hours and hours going from one link to another. there's too much in real real libraries [laughs] to occupy my time.
Delia

Delia begins her account here by saying that she does not like using the web, then goes on to describe how she engages with it in almost every aspect of her professional life – as a means of maintaining contact with a network of colleagues, as a place to find materials for learning and teaching, and as a location for research material. Her interview reveals that she a committed and innovative online teacher. Yet the web for Delia, as for Charlie, is in the end a realm associated with the inauthentic, and to become too immersed in it is to take on a deviant, geekish persona which has little to do with the real task of the academic. In laughing at her own choice of words Delia indicates that she is

aware of the incongruity of her stance. Still, for her, to spend hours on the web is an addiction, while to spend hours in the library is scholarship.

Sensuality

if I got a journal article I wouldn't read it from the screen, I would like to print it off, uh in any case I don't want it electronically I want a hard copy cos I like to sit down

[tape side 1 ends]

yeah I do yeah, where it's something that I have to kinda think about I like a kinda hard copy, whereas another thing if it's uh kinda looking at a news site y'know or a sports site, then y'know I'm quite happy to read the uh the Wimbledon results or the cricket score or whatever just from the web. uh with with things where I like to, where I want to kinda digest it, think about it, I do like a hard copy. yeah. I I read I I read quite a lot and I like reading books, y'know like uh I'm big in supporting books. yeah [laughs] proper books with texture and smell.
Tom

Tom, like Delia, is an experienced online tutor and course designer. Yet, for him, the web is the realm of the temporary – news, sports results – where shifting snippets of text can be engaged with in their ephemeral, digital form, '*just* from the web'. For serious reading, reading which needs to be thought about, only 'hard copy' will do. The term 'hard copy', repeated three times in this short extract, suggests the material stability, unyieldingness, reliability of the printed text, setting up the digital as its 'soft' other – mutable, unreliable, somehow less serious. News and sport is 'looked at' in its digital form, it remains separate and outside Tom as a reader, where serious, thoughtful reading is 'digested' – the metaphor suggests that serious reading becomes part of the reader, takes place inside. Finally, books have a sensuality, a material presence which the digital lacks. Though he takes a step back from it with ironic laughter, Tom's enjoyment of the materiality of the book – its 'texture and smell' – brings to mind the almost fetishistic pleasure in the possession of the printed text which came through in some of the students' accounts. It is interesting that Tom talks about 'supporting' books, as though they are somehow under threat from the digital – reading a book is cast here almost as a political act, an act of resistance.

Translation

how is reading off the web, a page of hypertext or whatever, different from reading a page from a book?

um [pause] I always print them off. but, it's it's easier and harder isn't it. it's easier because you can scroll down as opposed to skipping, you can search it so you can find, so in a way that's easier but it's harder just because it's more difficult, you know the crap of hypertext is that you can't read it from printout you know the font's not right y'know all those things that printers have spent so long honing but no-one on the internet bothers with. well, some people bother but quite a few people just bung stuff up, especially academic stuff, it's just cut and paste jobs.

what about when something's really well done, y'know it's got useful links in it, hotlinks and stuff?

well I value that but I still, I still, you know a book's got an index [laughs]. it sounds like I'm really negative and I'm not, but I just, I don't think it's as readable or useful.
Diane

Diane's account is interesting in the way it concerns itself with the translation of text between its digital and print forms. While digital text has some advantages on screen – searchability and (oddly) scrollability – when printed out it is hard to read and its material form is impoverished. Likewise, she discusses 'hypertext' purely in terms of the shoddy translation from the print form into the digital – the lazy 'cut and paste' job. In this account, the print form with its sophisticated typographical conventions is 'honed', while internet text is raw, mostly just 'bunged' up. This point is fair enough, reflecting as it does the relative infancy of the medium and its place in the 'late age of print'. But it is odd how Diane's account struggles to consider digital text from a perspective other than that of print convention and in the end fails, unable to engage with the specificity of the digital medium and falling back finally on a blanket deprivileging of the digital mode – 'I just, I don't think it's as readable or useful'.

Three perspectives on these accounts

A disturbing shift

I suggest that there are three related ways of understanding the accounts these students and their tutors give of their relation to digital text. I touch on the first –

the new modes of subjectivity associated with the digital – only briefly, since this has already been discussed in some detail in this and the previous chapter. As Poster reminds us, when textuality shifts, so does subjectivity:

> Changes in the configuration or wrapping of language alters the way the subject processes signs into meanings, that sensitive point of cultural production. The shift from oral and print wrapped language to electronically wrapped language thus reconfigures the subject's relation to the world. (Poster, 2001b: 12)

This is perhaps the most fundamental issue at stake in the way students and their tutors engage with electronic text. The reconfiguration of subjectivity can be deeply disturbing, particularly when it takes place within institutional and power structures which privilege a different, more humanistic mode of understanding who we are and how our relation to the world is constituted. When seen from this perspective, it is unsurprising to find that students and tutors have a distinct preference for the 'old' textual forms – historically it is these that have operated to construct the autonomous, reasoning subject, the successful student, the respected academic.

that's the way it's always been you know for millions of years so I don't see why it should change now. it seems to have worked so far, so I don't see why it should be changed.
Charlie

Papyrocentrism and the aversion to the digital

The second, related way of approaching these accounts revolves around the argument this chapter has made for the 'papyrocentrism' of academic discourse. Scholarly argumentation is to a large extent structured by the print form, and formal modes of scholarly expression which operate within the terms of the digital environment have yet to be developed. The digital does not – and arguably cannot and should not – represent academic authenticity and legitimate knowledge in the way that the print form does. Thus in the 'late age of print' the majority of online learning experiences presented to students (and modes of scholarship available to their teachers) are offered from within an instrumental,

print paradigm, in which the network is used largely as a method of distribution of text intended for print rather than as a site for the exploration of new scholarly textual forms. It is not, therefore, surprising that most quickly give up attempting to engage with text presented digitally in any terms other than those of print.

The use of the internet as a means of distribution of printed text is not necessarily problematic, aside from the inevitable burden of printing costs passed on to the students, and the neglect of a new pedagogic space caused by the failure fully to engage with the challenges of the digital form. It does, however, seem to set up a clash of expectation in students. For many – the ones discussed here are representative – the conflict between the print and digital paradigms is a cause of anxiety. Much as, in the previous chapter, I demonstrated how students online are disturbed by the clash of Cartesian and postmodern modes of experiencing subjectivity, so they are also disturbed by this mis-match between the two modes of textuality. For some students – Charlie is an example – the anxiety resulting from having to negotiate the tension between the two textual forms appears to translate into an extreme aversion to the online mode.

There is no reason why learning from screen 'texts' need be a wretched experience. Several of the students I spoke to who complained of the physical discomfort of reading from screen, the feeling of wanting to get it over with as quickly as possible, were happy to spend many hours immersed in gaming environments. In the following chapter I consider some pedagogies that do attempt to engage with the digital medium from outwith the print paradigm, pedagogies that perhaps have something in common with the 'new critical vocabulary' which Hayles calls for in the way we think about the pedagogical issues at stake in the uses of digital text:

> This new critical vocabulary will recognize the interplay of natural language with machine code; it will not stay only at the screen but will consider as well the processes generating that surface; it will

> understand that interplays between words and images are essential to the work's meaning; it will further realize that navigation, animation and other digital effects are not neutral devices but designed practices that enter deeply into the work's structures; it will eschew the print-centric assumption that a work is an abstract verbal construction and focus on the materiality of the medium. (Hayles, 2002: 373)

Ways of reading and the deep/surface binary

I think most of the web is travelling, there's not that much arriving, d'you know what I mean?
Marianne

A third perspective on the accounts given to me by students and tutors is to do with the way in which digital text, particularly when it is on the web, asks them to adopt a way of reading which is at odds with the academic tradition of careful attention, 'deep' reading, 'absorption' and close analysis of written text. When we read on the web we scan and skim, we follow links, we move on quickly over the surface of the text, we 'surf' (Morkes and Nielson, 1997, Dyson and Haselgrove, 2000, Rho and Gedeon, 2000). To adopt such a way of reading is, in its very act, to adopt a questioning attitude to the authority of the text. As Lurie points out:

> HTML, hyperlinks, frames, and meta-tags are the essential building blocks of the web. They combine to create a highly associative, endlessly referential and contingent environment that provides an expanse of information at the same time that it subverts any claim to authority, since another view is just a click away. (Lurie, 2003)

In its endless referentiality, its atmosphere of 'flickering signification', the web inclines us toward a deconstructive mode of reading. This is not to say, as the early hypertext theorists held, that the web and hypertext somehow miraculously manifest the prophecies of the poststructuralists. For Hayles, deconstruction is itself the 'child of the information age':

> As writing yields to flickering signifiers underwritten by binary digits, the narrator becomes not so much a scribe as a cyborg authorized to access the relevant codes. The progression suggests

> that the dialectic between absence and presence came clearly into focus with the advent of deconstruction because it was already being displaced as a cultural presupposition... Presence and absence were forced into visibility, so to speak, because they were already losing their constitutive power to form the ground for discourse, becoming instead the subject of discourse. (Hayles, 1999: 43-44)

The printed text, fully present in its material form, becomes online a flickering, contingent entity neither fully present nor fully absent. To engage with online text therefore involves the reader in an engagement with the presence/absence dialectic which cannot help but be deconstructive. In that deconstruction involves the radical questioning of textual truth and a profound commitment to the investigation of meaning as it is constructed through language, this might be seen as a good thing for learners to be doing. Instead, as I have shown, it is something which seems to run counter to students' – and tutors' – expectations of how reading should be conducted within learning contexts.

One way of approaching why this might be is through consideration of one of the most pervasive and influential binaries current within theories of learning – the so-called 'deep' and 'surface' approaches to learning (Entwistle, 1981, Marton et al., 1984/1997, Ramsden, 1992). Though subject to some recent critique (Webb, 1997, Haggis, 2003), the deep and surface model still has 'foundational status within higher education research, practice and development' (Webb, 1997: 195), being regularly applied both to 'traditional' learning contexts and to those which are mediated by computer technology (for some recent examples see McLoughlin, 1999, Hara et al., 2000, Jelfs and Colbourn, 2002).

The deep/surface approach model is of particular interest in the context of this chapter in that it is to a large extent concerned with the ways in which students approach (printed) texts within learning situations. The two contrasting approaches to studying a text are summarised by Laurillard in the following way:

> one is known as the 'deep approach', where the student looks for meaning, and processes the text in an 'holistic' way, preserving the original structure of the discourse and therefore preserving its intended meaning; the other is known as the 'surface approach', where the student focuses on key words or phrases and processes the text in an 'atomistic' way, distorting the original structure and therefore changing its meaning. (Laurillard, 1993: 51)

The 'deep' approach is associated with meaningful understanding of a topic or concept, while the 'surface' approach is associated with rote learning and task completion (for example last minute cramming for examination success) (Ramsden, 1992: 46). The 'deep' approach involves careful attention to the overall coherence of the text while, when taking the 'surface' approach, learners' 'awareness skated along the surface of the text' (Marton and Saljo, 1984/1997: 40). 'Deep' learning is associated with an 'holistic' approach to the structure of the text or learning task, while 'surface' learning takes an 'atomistic', fragmentary approach (Svensson, 1977).

Surface learning may be seen as a sometimes strategic response to the expectations arising in educational contexts from society's 'static and factual conception of knowledge' (Saljo, 1984/1997: 88), but it is certainly not the privileged term in the deep/surface binary. For Ramsden, 'Surface is, at best, about quantity without quality; deep is about quality and quantity... Surface approaches are uniformly disastrous for learning...yet they may permit students to imitate authentic learning and to bamboozle their teachers into thinking that they have learned' (Ramsden, 1992: 45). Further, for its proponents, the deep/surface model does not operate simply as a useful metaphor for how students approach learning tasks – it is drawn from 'a coherent body of empirical evidence' (Entwistle, 1997: 217) and acts as a 'description of important differences in the ways in which students learn' (213). Thus, as Haggis has pointed out, 'for a number of researchers now using these ideas (in particular, staff developers, and subject teachers doing pedagogical research), the overall model appears to be seen as describing a kind of 'truth' about how students learn'(Haggis, 2003).

Haggis and Webb have provided insightful critiques of this model. Haggis has explored its underlying 'elite values, attitudes and epistemologies', stressing that they 'make more sense to higher education's 'gatekeepers' than they do to many of its students' (Haggis, 2003: 108), while Webb has applied a deconstructive reading to the deep/surface binary and exposed the way in which it functions to perpetuate certain power relations within higher education (Webb, 1997). My own intention here is to explore the way in which this model works to construct a dominant view of textual interaction in learning contexts which deprivileges students' modes of engagement with digital text. A brief summary of the terms used to describe the 'deep' as opposed to the 'surface' approach to texts will be useful here:

deep	**surface**
'holistic'	'atomistic' (Svensson, 1977)
attention to structural cohesion of text	fragmentation, focus on 'key words or phrases' (Laurillard, 1993)
preservation of text's structure	'distortion' of structure (Laurillard, 1993)
'focus on what is signified'	'focus on the 'signs'' (Ramsden, 1992)
focus on 'what the text was about'	focus on 'the text in itself' (Marton and Saljo, 1984/1997)
preservation of author's 'intended' meaning	reader's appropriation of 'intended' meaning (Saljo, 1984/1997)
'Internal emphasis' – the reader-learner constituted as an interiorised, observing subject	'External emphasis' (Ramsden, 1992) – the reader-learner constituted by external structures ('demands of assessments' etc)

The deep/holistic approach – with its focus on structural coherence, stable signifiers, interiorised subjectivity and engagement with authorial intention – privileges a mode of approaching text informed by an ideal which can be associated with the print paradigm. By contrast the terms used to describe the surface/atomistic approach map clearly on to the modes which, as this chapter shows, are associated with the digital. In theoretical terms one of the most striking differences between the 'deep' and 'surface' approaches is the focus on the signified in the former, compared with that on the signifier in the latter. In

turn, in using the 'deep' approach the learner is characterised by a Cartesian mode of subjectivity, while the 'surface' approach inclines her toward a postmodern, externally constituted mode.

There is a strong tendency to focus on authorial intention as the guarantor of meaning in this model. For Saljo a 'major learning problem' with the surface approach is that 'the text is not decoded on the premisses on which it was written, and the reader, in his or her role *as learner*, does not seem to be directed towards reconstructing its messages' [original italics] (Saljo, 1984/1997: 85). Saljo acknowledges that, in the learning context, the relation between reader and author is defined by an asymmetric distribution of power, making it necessary for the reader-learner's own meaning-making activities to undergo a 'temporary subordination' (80) to the author's reasoning in order for successful ('deep') learning to take place. However, the assumption is still that the marks on the printed page – stable, unambiguous – act as the material manifestation of the 'original' meaning and intention of the author. The ideal, 'deep' learner in turn will approach the text with something like reverence, viewing their role as being to extract the author's 'message' complete and unsullied by their own acts of meaning-making. In this 'ideal' approach, the reader-learner is very much subordinated – temporarily or otherwise – to the author-teacher. As chapter six will show, the digital author is very different from its analogue counterpart. Distributed, fragmented, often anonymous or collective, authorship in the digital realm is far closer to what Foucault conceptualises as a post-'author-function' state (Foucault, 1988, Poster, 2001a) than to the humanistic, intending author assumed by proponents of the deep/surface model. How then can a mode of reading – an approach to learning – which looks to authorial intention as the ultimate guarantor of textual meaning survive the shift into the digital?

If the 'deep' approach depends on stable signification and the humanistic view of both author and reader, it also relies on a vision of the structural cohesion of the text which is impossible to maintain in the networked mode. As we have

seen, the learner taking the privileged deep/holistic approach will concentrate on 'preserving the original structure of the discourse and therefore preserving its intended meaning' (Laurillard, 1993: 51). Such terms – 'original structure', 'intended meaning' – border on useless when applied to the structureless, distributed, mutable, profoundly 'ungraspable' realm of internet textuality, where simply to read, to pass over the surface of the text, is to engage in a kind of critique of textual authority. To continue to operate within the terms of the deep/surface model while investigating students' approaches to learning online involves working within a discourse in which the online mode is deprivileged from the outset. Thus it is not surprising that Laurillard finds hypertext, for example, to be almost useless as an 'educational medium':

> on the one hand it is nothing more than a small but beautifully connected library, and on the other hand, by its very nature, it undermines the structure of the 'texts' it uses and reduces knowledge to fragments of information. (Laurillard, 1993: 122)

If we remain within a discourse which finds the deep/surface model to be the best way of thinking about learning we would say, with Laurillard, that digital text is not a good learning medium. If, however, we wish to engage with, rather than deny, the pedagogical importance of a textual realm of massive and growing cultural relevance, we would need to step outside the depth/surface binary and perhaps begin to see it as an element within a dominant educational discourse which actively works *against* the types of learning which take place within the realm of the digital. If we see students themselves as operating from within this discourse, it is unsurprising that their accounts revealed perspectives in which 'authentic' reading and learning took place within terms very like those described by the 'deep' approach. In these accounts, the privileged mode is one in which textual structure and meaning are stable, graspable and knowable. Digital text – slippery, uncomfortable, hard to 'absorb' – belongs to the realm of the inauthentic. It seems that a shift within the culture of learning, a nurturing of new types of literacy and new ways of knowing, are needed if we are to begin to engage with digital text on its own terms.

Chapter 4a: coda

The digital reader

Megan's was a lone voice which expressed an alternative conceptualisation of reading and learning from web text. I present it here as a coda in order both to offset the dominant theme of print-dependence described in the previous chapter and as a way of introducing the possibility of learner engagement with a different ideal of textuality and authorship – the two themes which are expanded on in the following chapter.

I have left interpretation of this passage as open as possible by including it 'raw', with no analysis of my own.

ok, um if you had to choose a single medium that you were happiest learning from, what would it be?

yeah, I'd say the internet. I generally find it easier to find out rather than in books, in the library, it's much easier with search engines, it's easier to search for for what you want, because even the library catalogues are confusing cos you once once you find what you're looking for then you've got to find it physically on a shelf or whatever, whereas online once you've found it, that's it there in front of you.

mmm, so what d'you do then, d'you read it on the screen or d'you print it off?

I usually read it on the screen, I scan it to see what might be interesting then I copy and paste it and then go back to the bits and read them in more detail like in smaller sections, rather than read it in one big chunk like a book if you scan it for like words that you know you're going to need or particular things and then you can break it up in sections.

what's it like then, when you're looking at say a web page, how would you describe that experience?

I always think of map reading you know? you've got to think of what you're looking for and then like find it, how to get there, rather than just having a book and reading, looking through a chapter, cos you've got so many like smaller pieces of information within the text, it's more, well it's called navigating and it is like you're navigating whereas you don't have to find it in a book, you just read it.

mm, so does that get in the way of reading/learning or

no I think you find out more, because it's the bits you're looking for are within things that aren't exactly relevant, whereas if you're looking at a textbook like the whole chapter's going to be pretty much relevant, where if it's online you'll be looking at other things as well like and taking what you want out of loads of different texts, and you find out more, you find more about the topic generally, rather than just the bits you were looking for.

what about if you think that reading a book as being quite a linear thing, d'you think it's quite different or not?

I think because there's links and stuff it seems like a whole set of separate pages, it's not like a page in a book, it's like a whole separate site with a separate piece of information, whereas with a book you tend to read it start to finish, but online you jump about a lot more, like selecting the bits you want, so I think time, after a bit, because you're not reading through a big chunk of stuff, it tends to be in smaller sections.

so d'you think that's a different kind of learning that you're doing online?

mmm, yeah, I suppose so because you're looking at lots of different things, rather than reading a book one one particular thing. there are lots of different sections, and it's broken down more online than it is in a book.

[gap of 8 lines]

so, would you say that computers have changed the way you learn?

definitely, rather than just looking through a book, which I find more difficult because it can get boring, online it's more interactive you can it's more colourful as well it's not, although it is just words it's not there's more pictures and there's more other things going on and also with things like online forums and message boards and things you can look at what other people have got to say, rather than just reading one person's opinion in a book, you can see different sides to it because you're looking at material by all sorts of different people, so I think its like when you're reading a book you just have the book, you've just got that and that's what you're doing, whereas online you can have so many different windows, you can be like looking at so many different things at one time! [laughs]
Megan

Chapter 5
Digital pedagogies and striated learning environments

Introduction

I ended the previous chapter by suggesting that the papyrocentrism implicit in dominant pedagogical discourses actively works to de-privilege the types of reading and learning which the digital domain appears to advance. I suggested that a cultural shift was required in the design of online learning, away from instrumental approaches towards an intention to engage with digital text from within the terms of an evolving digital culture.

In the first part of this chapter I will discuss some pedagogies which, with Strasma, I call 'emergent' (Strasma, 2001) in the sense that they represent what are still early, experimental attempts to work with the modes of textuality and subjectivity involved in the digital domain. My intention is not to present these approaches as examples of 'good practice' in the delivery of online learning, but rather to discuss them in terms of their attempts to engage specifically with the very different types of textuality offered by the online environment. Likewise I do not make sweeping claims for the liberatory power of such approaches. My interest is rather in assessing the pedagogies described here as media-specific methods of working and of perceiving the academic task.

My focus is on 'the text' in its broadest sense, thus the examples I use are drawn from work the primary concern of which is textuality and its changing forms. For this reason, the pedagogies I discuss have emerged primarily from work in the humanities – literature in particular – and from the work on new literacies emerging from composition studies in the United States.

In the second half of the chapter I move my discussion away from specific pedagogies towards pedagogical environments. This section considers virtual

learning environments, or 'e-learning systems', and their relation to the possibility of digital pedagogy. Using Deleuze and Guattari's conceptualisation of smooth and striated cultural spaces (Deleuze and Guattari, 1988), I will show how the virtual learning environment works to define itself as a space of containment, regulation and efficient progression – in Deleuze and Guattari's terms, as striated space. I will illustrate this section with reference to the popular virtual learning environment software WebCT. I make only a minor use of interview material in this chapter, which is largely a speculative and theoretical exploration of alternative pedagogical futures.

Part 1: Emergent pedagogies

'Embarassingly literal': Landow and hypertext

George Landow, Professor of English and Art History at Brown University, has conducted pioneering work on the educational uses of hypertext in the last few decades. His work with the new textual form in the classroom extends back as far as the 1980s, long before hypertext became embedded within the everyday practices of the connected world as html, the system behind the web.[1] Though for this reason it can hardly be described as emergent, I include it here because it represents groundbreaking and still current work in designing pedagogies based on characteristics specific to the digital medium.

The pedagogies he describes in *Hypertext 2* are focussed around his description of the 'extraordinary convergence' of hypertext with various strands of poststructuralist theory – the text is indeed subtitled *The convergence of contemporary critical theory and technology* (Landow, 1997). Landow sees hypertext systems as providing 'an almost embarrassingly literal embodiment' (32) of, in particular, Barthes' conceptualisation of the *scriptible* text and Derrida's emphasis on intertextuality and the de-centring of the text. In order to

[1] Landow's early uses of hypertext took place using the hypertext systems Intermedia and Storyspace, though many of the (stand-alone) 'webs' created using this software were later converted to html and put on the internet.

contextualise Landow's work to some extent, I provide here a very brief summary of these concepts and their relation to hypertext theory.

Derrida and the de-centred text

With the loss of the *logos* described by deconstructionist theory – the Word, truth or reality which anchors all thought, language and experience – we lose the metaphysical centre which forms the point for the fixing or nailing down of meaning (Derrida, 1978). Meaning, according to deconstruction, is never determinate, never fully present and complete in the sign but rather dispersed throughout the system of signification – a system of differences with no positive terms. This has serious implications for the ways in which we think about the nature of the text. Texts are no longer seen as closed, stable entities, holding within them definite meanings which the reader works to decipher. Rather, they become a temporary arena for the endless play of signifiers – they cannot be tied down to any one meaning, but remain open and pluralistic, subject to multiple interpretation. All texts are woven out of other texts in that every element of them refers to other writings which surround, precede or follow, much as the sign itself is composed of traces of every other sign. This is 'intertextuality'.

What is more, the traditional hierarchical relationship between texts is undermined. Where traditionally a so-called 'primary' text takes a central position, provides a focus for discussion and interpretation in the form of marginal or 'secondary' texts, deconstructionists would claim not only that the central can become marginal (and vice versa) but that the very difference between the two can be brought into question. Since both are subject to infinite play of meaning and interpretation, we cannot say where one ends and the other begins. The text is 'a differential network, a fabric of traces referring endlessly to something other than itself, to other differential traces. Thus the text overruns all the limits assigned to it so far.' (Derrida, 1979: 162)

As Landow and other early hypertext theorists (Bolter, 1991, Landow, 1994, Selfe and Hilligoss, 1994, Joyce, 1995, Turkle, 1996) have suggested hypertext,

particularly the hypertext system that is the web, seems in a sense to materialise these concepts. The web, sprawling, limitless, consisting of endless, unstable, changing elements, each one potentially linked to each other and therefore bearing within it infinite traces or connective possibilities, has been seen by many to represent in material form the characteristics the poststructuralists see in language systems. Hypertext is endlessly recenterable (as a reader moves through a hypertext he or she continually shifts centre or focus, is continually active in creating new possibilities for meaning); it is also explicitly intertextual, stressing connectivity through the infinite configurability of its links between text and image fragments.

Barthes and the *scriptible* text

In *S/Z* Barthes distinguishes between the *lisible* or 'readerly' classic text (the realist novel for example), which places the reader in the position of passive consumer of a narrative and meaning controlled by the author, and the *scriptible* or 'writerly' modern work (such as Joyce's *Ulysses*) which forces its readers to be active in the construction of meanings which are multiple and inexhaustible (Barthes, 1974). Landow and others have seen Barthes' description of this ideal, *scriptible* text as having an uncanny resonance with hypertext and the web. In Barthes' 'ideal text':

> the networks are many and interact, without any one of them being able to surpass the rest; this text is a galaxy of signifiers, not a structure of signifieds; it has no beginning; it is reversible; we gain access to it by several entrances, none of which can be authoritatively declared to be the main one; the codes it mobilizes extend as far as the eye can reach, they are indeterminable. (5)

Barthes does not refer explicitly to hypertext or other forms of electronic writing – they did not yet exist. Yet there is a sense in which, particularly in this often-quoted passage, his ideal text can be read as a description of hypertextual forms. This ideal text is 'plural', its meanings multiple, based as they are on the 'infinity of language' (6). In engaging with this text, the role of the reader is re-cast. From the position of passive consumer, he or she becomes an active

producer of the meaning of the text. This 'liberation' of the reader deals a death-blow to the Romantic conception of authorship – famously, Barthes describes this 'birth' of the reader as being 'at the cost of the death of the Author' (Barthes, 1977).

The case made by early theorists for the 'liberation' of the reader through hypertext issues from the way in which it forces the reader to take control of his or her own experience of the text, by requiring choices to be made about how and in what order connections between blocks of text, or units of meaning, are made. The linearity of the print form, in which the unfolding argument or narrative is controlled by the author, is displaced by the multilinearity of hypertext, in which multiple possibilities for progression through the text are offered via links and paths that, while generally being programmed in by the author, are followed in an order chosen by the reader herself. In the case of texts generated in public online spaces – MOOs, bulletin boards, chat rooms – the vision of the author as the single originator of the text and possessor of its meaning is submerged completely – the reader quite literally is the writer.

Pedagogical hypertext

Later theorists (for example Duguid, 1996, Aarseth, 1997, Keep, 1999, Ryan, 1999b) demonstrate a concern with the sometimes crude technological determinism of early hypertext theory – its suggestion that hypertext operates as an autonomously liberatory social force, that simply by engaging with the new modes of reading we are involving ourselves in a brave new postmodern world, where the reader is liberated from the author, identity freed from the body, the learner liberated from the teacher and the mind let loose from the linear prison-house of print by the freely-roving associational capacities of hypertext. There is also a concern that the casting of poststructuralist theory as a miraculous prophecy of the texts of the information age is an over-statement at best, and at worst an 'imperialist' appropriation. Aarseth, for example, states that:

> To claim that hypertext is fulfilling 'postmodern theory' – and that 'postmodern theorists have been doing this without knowing it' (Bolter, 1991: 83) – is an attempt to colonize several rather different critical fields by replacing their empirical object or objects on the imperialist pretext that they did not really have one until now. (Aarseth, 1997: 83)

For Aarseth, to understand the claims of the poststructuralists as a call for a new type of textuality embodied in hypertext is to mistake their critique of humanistic paradigms of signification for 'a normative attack on the limits of a specific communication technology (printing)' (84).

Though these problems with aspects of Landow's theorizing are significant, his work demonstrates a commitment to educational innovation, to the exploration of new pedagogical methods which are specific to the new forms of textuality emerging out of digitisation. He views hypertextual environments as spaces where pedagogical relationships become re-articulated and where the academy might be re-formed.

> One chief effect of electronic hypertext has been the way it challenges now-conventional assumptions about teachers, learners, and the institutions they inhabit. It changes the roles of teacher and student in much the same way it changes those of writer and reader. Its emphasis upon the active, empowered reader, which fundamentally calls into question general assumptions about reading, writing, and texts, similarly calls into question our assumptions about the nature and institutions of literary education that so depend upon these texts. (Landow, 1997: 219)

Landow's work with students and hypertext revolves around a series of challenges to the scholarly and pedagogical norms which he associates with print technology. It offers a refusal of closure, a problematising of the notion of textual authority, a questioning of the relation between primary and secondary texts, a move away from the individual authorship ideal towards the collaborative production of the scholarly text, and a commitment to interdisciplinarity. It also hints at the notion of a reversal in the reader/author and learner/teacher hierarchies.

I will illustrate this work with an example.

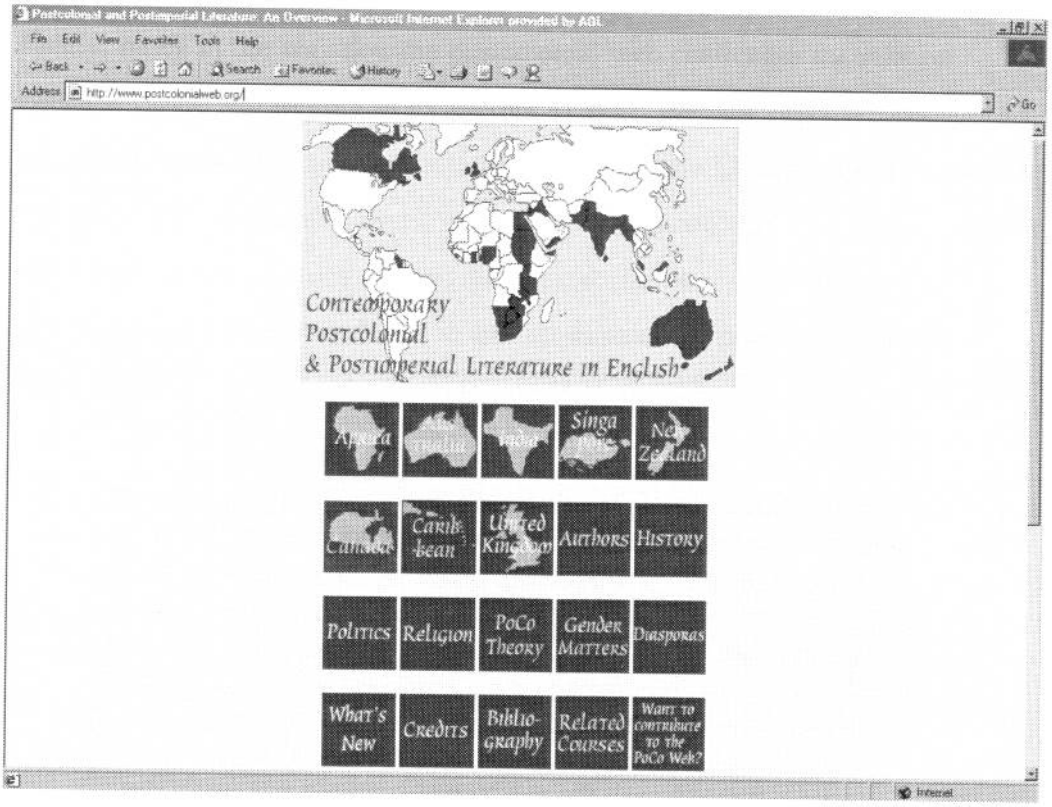
The *Contemporary postcolonial and postimperial literature* site

The extensive collection of materials which make up the *Contemporary postcolonial and postimperial literature in English* web site[2] grew out of an experimental assignment Landow conducted with a group of students at Brown University in the early 1990s (Landow, 1997: 242). Having been given various resources – maps of Nigeria, a bibliography and a chronology – these students were asked each to contribute two brief essays on the Nigerian poet Wole Soyinka. One essay was to consider one of the poet's works, the other was to focus on an aspect of the poet's political, historical or literary context. Twenty-one of the best works produced by these students were linked into a hypertext 'web' by Landow using the software Intermedia. The same assignment was repeated with the next semester's cohort of students, but this time they were asked not to write on something already covered by the 'web' unless they disagreed with it. According to Landow, this cohort was inspired by the work of the earlier group to produce an additional forty documents which, linked and incorporated into Intermedia with the original documents, 'clearly integrate this Nigerian poet into the canon of English literature while providing a foundation for future work by other students' (243).

Over following semesters, this body of work – the 'Soyinka web' – became the core of a much larger corpus of documents relating to postcolonial fiction and autobiography known as 'Context34'. This eventually contained around 500 documents mainly created by students, with strands on thirteen individual authors, and including pieces on their geographical, political, social and philosophical contexts. Landow created graphical overviews to contain the documents and hypertext links to connect them to each other. In 1996 these materials became the 'Postcolonial and postimperial web', and shifted onto the

[2] http://www.postcolonialweb.org

internet. This web – now a vast resource – has continued to grow, not only through the addition of documents and images created by students, but by pieces contributed by academics working in the field and by writers and poets themselves.



5. The postcolonial web home page

In what senses does Landow's project represent an attempt to work with the specificity of digital text? In one important sense it does not – the individual 'essays' or documents created by the students are largely written in the linear form defined by print convention. What is more, the relation between student and teacher is conventional, with Landow operating as the god-like web master, assessor[3] and censor of students' contributions and creator and programmer of

[3] Landow is revealingly vague about how he approaches the issue of assessment, saying only that 'accuracy, quality of research, writing at the level of the individual sentence and paragraph, and rhetorical effectiveness still count for a great deal; but webs also have to show visual literacy, skillful linking, clear and effective organization, and the like' (Landow, G. (1997) *Hypertext 2.0: the convergence of contemporary critical theory and technology,* Baltimore: The Johns Hopkins University Press).

the conceptual and material links between them. However there are several ways in which the postcolonial web does represent an emerging digital pedagogy – I outline these here.

Centre and margin

Firstly, much in the way that the postcolonial web challenges the relation between centre and margin in its attempt to assert the new literatures as canonical, so its links and connections work to enable its reader to shift between 'primary' and 'secondary' texts, between texts and contexts, in a way which not only 'blurs the boundaries of individual texts' (Landow, 1997: 25) but which disrupts disciplinary boundaries in an ever-expanding, potentially infinite reaching out:

> [The] hypertext component, for example, already contains materials on British and continental history, religion, politics, technology, philosophy, and the like. Although Soyinka writes in English, received his undergraduate degree from Leeds, and wrote some of his work in England, he combines English and African contexts; and therefore, to create for him a context analogous to that which one has created for Jonathan Swift and Robert Browning, one has to provide materials on colonial and postcolonial African history, politics, economics, geography, and religion. Since Soyinka combines English literary forms with Yoruban myth one must provide information about that body of thought and encourage students to link it to materials on Western and non-Western religions. (255)

As one critic of Landow points out, 'following links to contextualise [a] poem is not the same as reading it' (Miall, 1999). Such an approach in its 'unmargining [of] all existing literary texts, facilitating multilinear readings of them, and treating each topographically as a network of signifiers with no overall integrity' (ibid.) presents a serious challenge to traditional ways of reading and of defining the literary text. It suggests a fluid movement over textual surfaces rather than an in-depth 'close' reading of a clearly defined textual artefact. As I suggested in the previous chapter, this is only problematic if we approach the reading of a digital text from within a paradigm informed by print norms,

though it is a reasonable criticism of an approach which simply places texts written for print into a digital environment with no consideration of the necessity or desirability of reformulating that text for the digital reader.

A more serious criticism might be levelled at Landow's alignment of the active, empowered hypertext reader with the 'conception of an active, constructivist learner' (Landow, 1997: 220). It assumes a reader-learner moving with unrestricted freedom through a multilinear text, encountering and engaging freely with text fragments which enable them to define for themselves the material constitution of the signs and thereby the 'meaning' of the text. Such a vision re-asserts the digital reader as a unified subject acting on a world organised according to knowable rules, rather than as a cyborg entity informed by, as well as informing, the digital-textual world in which it is immersed. As Keep reminds us:

> The image of a reader who may 'freely' shape the text according to his or her 'intentions' assumes a self-knowing, undivided subject, free of the internal contradictions which are the condition of embodied subjectivity. Moreover, it effaces the obdurate quality of hypertext, the ways in which its organizational structure necessarily mediates between the reader and his or her desires, just as surely as the supermarket forces its desires on the shopper. The sense of 'freedom' in both instances is an illusion maintained by the very fact of 'choice'. (Keep, 1999: 175)

This failure to engage with a theory of the subject, to unproblematically cast the learner as a centred, autonomous – even 'empowered' – agent acting within a 'neutral' environment, is a criticism which might be levelled at many who assume a link between hypertext, computer assisted learning and constructivism (Whittington, 1996, Chan et al., 2002, Howard-Jones and Martin, 2002, Lainema and Makkonen, 2003, Mazzolini and Maddison, 2003).

Hierarchies

The second way in which the postcolonial web stands as an emergent digital pedagogy is in its challenge to the traditional relations between teacher and

student, author and reader. For me, this does not consist substantially in the ability of the reader to take on an author-like function in his or her passage through the links of the web. Rather it is in the way in which the hypertext, collaboratively produced, contains linked fragments written by students, established academics, poets and authors which are not distinguished in a rigid hierarchical fashion. Such fragments invite the reader to move among and engage with each on terms rather different from those textual artefacts produced from within the norms of print. For Landow, such a move works to empower the students involved in the construction of such a web by placing them 'within – rather than outside – the world of research and scholarly debate' (Landow, 1997: 220). As Aarseth points out, however, it is worth bearing in mind that this liberatory move is likely to be effective more through its embedding in a context of social and curricular reform than through the specific characteristics of the technological environment (Aarseth, 1997: 171).

Openness

The third characteristic of the postcolonial web which might be seen as being particular to its medium is its refusal of closure, and the concomitant challenge such refusal presents to the ideal of textual authority embedded metaphorically in the 'finality' of the print form. Such a hypertext resource is, like Valery's poem, never finished, only abandoned:

> Such an enterprise…inevitably redefines the educational process, particularly the process by which teaching materials, so called, develop. In particular, because hypertext corpora are inevitably open-ended, they are inevitably incomplete. They resist closure, which is one way of saying that they never die; and they also resist appearing to be authoritative: they can provide information beyond a student's or teacher's wildest expectations, yes, but they can never make that body of information appear to be the last and final word. (Landow, 1997: 255)

New academic writing: Ulmer's 'electracy'

Landow's later work with students demonstrates a shift away from the read-only informational hypertext exemplified by the postcolonial web towards hypertextual forms created by students themselves. These, according to Landow, fostered a new kind of academic writing which 'enabled students to explore and create new modes of discourse appropriate for the kind of reading and writing we shall do increasingly in e-space, the writing necessary for the twenty-first century' (220)[4].

In asking them to construct their own discrete webs in response to assignment demands, Landow found students writing in a form of collage, appropriating and juxtaposing critical and contextual fragments, self-written discussion pieces and passages from work by contemporary authors. Such work often mingled academic writing with the students' own poetry and fiction. One student (Stevenson, 1996) constructed a web relating to Freudian theory, mixing discussions of the main strands of Freudian thought with graphical representations of Freud's model of the mind. These fragments were then interlinked with the text of a short story by Kipling which the student felt provided illustration of aspects of psychosexual theory. In juxtaposing discussion pieces with a literary work in this way, he 'created a hybrid form of writing in which the intellectual connections and interpretations consisted only in links' (Landow, 1997: 257).

Linkage, collage and juxtaposition are also key strategies in the work of Greg Ulmer at the University of Florida (Ulmer, 1989, Ulmer, 1994, Ulmer, 2003a). For Ulmer, the internet is a 'medium of learning [that] puts us in a new relation to writing' (Ulmer, 2003a: 1). It demands that we confront the possibility of a new type of literacy, a relation to the symbolic representation of knowledge which Ulmer calls 'electracy'. Ulmer's work, strongly influenced by

[4] Landow explores and demonstrates some of these hypertexts in his hypertextual work *Writing at the Edge* (available only in Storyspace) (Landow, G. (1995) *Writing at the edge*, Eastgate Systems, Storyspace hypertext).

poststructuralist theory – in particular the work of Derrida – emerges from an earlier concern with the modes of thought enabled through the analogue video form. The focus of his most recent text, *Internet Invention: from literacy to electracy*, however, is on the forging of a new writing pedagogy which works with the specificities of digital media. It is a complex and broad-ranging pedagogical approach which, partly because it attempts to provide an alternative to the forms of rationality associated with print literacy, often resists simplification and explanation of the sort I will nevertheless attempt to give.

While his work is primarily within the disciplinary areas of film, composition studies and the teaching of hypermedia, Ulmer stresses that his pedagogical approach, with its novel positioning of the personal towards the public, can be applied across multiple subject areas. It is no less than an exploration of how we, as learners and teachers, might use internet spaces to work towards a new social and epistemological formation which belongs to the digital age. As Ulmer says, 'electrate peoples who experience thought as virtual image will organize collectively in some new way that has not come fully into view' (Ulmer, 2003a: 8).

For Ulmer, the analytic, logically developing, linear model of the research paper and print essay has an uneasy relationship to the digital, much as the medieval practice of dictation made little sense pedagogically after the invention of print:

> Writing a research paper involves using argumentative logic and the essay form to transform information stored in libraries into individual understanding. It is an institutional practice designed to transfer knowledge from the collective archive to each new generation of readers. This is a legitimate practice for the literate classroom, disrupted by the posting of large numbers of 'readymade' papers on the internet. The long-range solution to this problem is to invent pedagogies and practices native to the internet, which will not abandon literate skills, but integrate them into the new apparatus. (Ulmer, 2003b)

Ulmer's approach is not, however, simply a response to the issue of plagiarism. Rather it is an attempt to foster a new, non-instrumental mode of reasoning

particular to our inhabitation of cyberspace, a mode which Ulmer calls 'image reasoning'. It involves a shift of focus from text to image, from the objective to the expressive, from empiricism to aestheticism, and from analysis to affect – 'if literacy focused on universally valid methodologies of knowledge, electracy focuses on the individual state of mind within which knowing takes place' (ibid.).

How it works: mystory

Ulmer's stated pedagogical principles and goals seem at first glance quite conventional – to foster active learning, collaborative learning and independent learning within a context of problem based learning (Ulmer, 2003b). It is only on further investigation that his approach, as one reviewer put it, 'all seems, well, radical' (Dickson, 2003). The problem Ulmer poses to his students is the issue of their own identity and its modes of formation. The reason for this focus appears to be partly metaphorical – 'the problem of one's own identity is a simulacrum of the unknowns of any field of knowledge' – and partly pedagogical – 'it is difficult to remain indifferent or disengaged when the heart of the inquiry is a vision of one's own being' (Ulmer, 2003b).

Working from the assumption that identity is constituted via a series of dominant discourses and ideological interpellations, Ulmer asks students to explore four discourses/institutions which work to entrench us within particular subject positions – family, entertainment, career and history-community[5]. This exploration takes the form of a 'mystory', a neologism coined by Ulmer after history and herstory. Mystory takes the form of a short series of web pages in which students make hypertextual compositions consisting of combinations of personal narrative, exposition, theoretical and literary fragments and – most importantly perhaps – image and linkage. Each mystory represents a personal

[5] Ulmer refers to these four discourses/institutions as the 'popcycle'.

attempt on the part of the student to record the factors organising their experience of the world through a form of self-portrait.[6]

For Ulmer, the mystory represents a digital alternative to the print essay or research paper. He likens the act of composing online to that of curating an exhibition, in which largely 'readymade' or pre-existing elements are arranged together through an intellectual act which consists less in exposition or argumentation than in the appropriate and meaningful use of linkage and collage. The internet, particularly the web, operates as a kind of digital beach upon which the student gathers the flotsam and jetsam – the image and text fragments – which they need to organise this vision of the self:

> The mystory maps the makers' passages between living and artificial memory, between embodied experience and the social archives of lore, libraries, databases…and other external collective information storages. (ibid.)

In composing the mystory the intention is not only that students engage with a new form of literacy appropriate to the digital (electracy), but also that they learn the basic web authoring skills to enable them to become active subjects within digital space. Plagiarism, profoundly problematic where the literacy or print paradigm is applied to the digital text, for Ulmer becomes a useless term in electracy 'since learning involves designing the user interface in a way specific to the unique, singular qualities of the learner's sensibility, experience, memory' (ibid.).

Having composed four mystories around the four discourse areas, the student then undertakes a task of filtering in which he or she extracts the key themes and images which repeat across the four mystories. These are then formed into a single 'wide image' which encapsulates the overarching pattern revealed by the

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[6] Some examples of student mystories are available from Ulmer's web sites at: http://web.nwe.ufl.edu/%7Egulmer/longman/introduction.html and http://www.ucet.ufl.edu/~gulmer/course97/rushmore.html

student's investigation into their constituted selfhood. As Ulmer explains:

> By means of the mystory students locate a fundamental mood or attunement that is the atmosphere of their life, a feeling and a metaphysics (showing how things *are*, irreparably) that may be embodied in a material, poetic image... In any case, the mystorical pedagogy inverts and displaces (deconstructs) literate 'scientific' practice that aspires to objectivity and the setting aside or exclusion of the other popcycle discourses from education. In mystory, the research is motivated by a search for one's wide image, for the emotional atmosphere that mediates one's experience of knowledge or expertise. (Ulmer in Memmot, 2000)

The aim of researching the personal wide image is not for its confessional, therapeutic value, nor is it intended as a merely solipsistic exercise in self-discovery. Firstly there is a strong emphasis on collaborative work in students' devising of their method for mystory construction. Secondly, and more fundamentally, through students' documentation of their relations to dominant discourses and institutions, the pedagogy aims to constitute them as rhetorical agents ('egents') capable of orienting themselves to issues of public policy and community in a move which places the personal, the expressive and the visual back into academic discourse.[7]

Ulmer's theoretical and pedagogical approach is ambitious and highly complex – to use his methods with students would require significant time to be spent in explanation and illustration, alongside training in the practical skills of digital authorship (though Ulmer claims this can be done quickly and easily through peer tutoring). The aims of and claims for mystory are radical and exciting, yet its complexity must place it outside the realms of possibility for teachers working within extreme time constraints and unsympathetic institutional contexts.

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[7] Ulmer's web site contains an example of a student's mystory being used to explore the issue of capital punishment, see http://web.nwe.ufl.edu/%7Egulmer/longman/MEmorial/MEmorial.html

Yet such pragmatic concerns do not of course render an emergent pedagogy like mystory useless. On the contrary, they emphasise the need for digital pedagogies to be embedded within a context of institutional reform and a shifting of the notion of what constitutes legitimate academic discourse. Such a shift would also, however, have to consider the issue of assessment, something on which Ulmer – like Landow – is almost silent, saying only that assessment of the wide image should take place on the basis of 'its formal adherence to the principles and relays developed throughout the course' (Ulmer, 2003a: 203). The point of the mystory is that it is personally meaningful, that the wide image should prompt the 'Eureka of recognition' (Ulmer, 2003b) in the student who has constructed it. As Dickson stresses in his review of *Internet Invention*:

> The 'audience' for electronic compositions…is not the audience for print compositions. The audience is less an Other that one researches and then manipulates than the (internal) Other that one excavates and then monumentalizes online. (Dickson, 2003)

Such a perspective makes the prospect of assessing the electronic composition from any position not that of the 'internal Other' rather compromising.

'Feminized textual space': LeCourt's online classroom

The breadth of scope of Ulmer's approach – its ultimate aim being the formation of a global network of electrate 'egents'[8], critical thinkers with 'a new approach to community problem solving and public policy formation' (Ulmer, 2003a: 174) – is matched by the complexity of his pedagogy. By contrast the pedagogy of Donna LeCourt, as described in her paper 'Writing (without) the body: gender and power in networked discussion groups' (LeCourt, 1999) is simple in its approach while remaining ambitious in its aim.

Where Landow and Ulmer both work primarily with hypertext and hypermedia, LeCourt's focus is on digital textuality as it emerges in asynchronous online discussion groups. While the approach she describes in her paper is not as sustained an attempt to devise a distinctly digital pedagogy as those of Landow and Ulmer, it is of particular interest firstly in that it engages with a different mode of digital textuality (the discussion group) and secondly in that it is informed by a more traditional (feminist) emancipatory agenda not – explicitly at least – shared by the work of the other two teachers I have been describing.

LeCourt works from the perspective that subjectivity is constituted through language, and that online classrooms are spaces where the invisibility of the body and the lack of the discursive norms of face to face contact offer new possibilities for the voicing of discourses particular to the feminine. Her pedagogy is particular to the digital environment in that it uses the communicational features of the latter in order to enable her (both male and female) students to begin to articulate alternative modes of subjectivity. For the biologically female students, this will be a mode in which the 'body of the biological woman' is not the prime 'organizational principle through which all her discourse is interpreted' (160).

Employing Irigaray's post-structuralist feminist theory (Irigaray, 1985), LeCourt aligns the possibilities for multivocality within online discussion spaces with the ability to speak 'difference' – to take up multiple subject positions in a way which disrupts the univocality which, for Irigaray, is the mode of signification belonging to the patriarchy. The taking up of multiple subject positions in the online classroom is thus a form of resistance for LeCourt. She sees the medium as enabling 'a form of textuality in which

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[8] Coining yet another neologism, Ulmer refers to this network as the 'EmerAgency' – presumably a (playful) play on the *emergent* status of electrate knowledge, the notion of the (software/undercover?) *agent*, the possibility of individual *agency*, and the state of global *emergency* which such a body of politicised 'egents' might begin to confront through electrate reasoning.

multiplicity might be spoken more easily than in other discursive realms' (LeCourt, 1999: 159).

LeCourt outlines her approach through the description of a 'Writing Theories' course taught to first semester Masters students. She aims to provide a learning environment in which, to as large an extent as possible, 'many of the "givens" of both oral and written discourse are disturbed' in order that students are 'much less likely [to] invoke the already constituted subject positions usually created within other discursive realms, particularly those of educational discourse' (160). She provides a discussion board environment for her students with a minimum requirement that they post once a week. The students are given minimum instructions as to what they should discuss – only that they should respond to class readings or 'bring up issues related to the reading from your teaching, life, or other reading' (161). The aim of providing minimum specific purpose in the discussion is in order that:

> there is no 'exigence', to use Bitzer's (Bitzer, 1968) term, created by a rhetorical context through which students can order their discourse, except the more localized contexts, which change from posting to posting. (160)

Most powerfully perhaps, LeCourt allows her students to choose whether or not to remain anonymous – in the class she describes, every student chose to take up a pseudonym. She does not monitor the class discussion as it is progressing, and allows her students to decide whether or not she should take part in the discussion herself. In the case she presents, the class allowed her to take part but only as long as she herself used a pseudonym.

Mimicry and *parler femme*

The analysis LeCourt provides of the exchanges which take place in this discussion group revolve around her examination of them for examples of the enunciation of a feminised discourse. In Irigaray's terms, this is a discourse

which speaks the difference of the feminine outside the terms of phallocentric rationality:

> 'She' is indefinitely other in herself. This is doubtless why she is said to be whimsical, incomprehensible, agitated, capricious…not to mention her language, in which 'she' sets off in all directions leaving 'him' unable to discern the coherence of any meaning. Hers are contradictory words, somewhat mad from the standpoint of reason, inaudible for whoever listens to them with readymade grids, with a fully elaborated code in hand. (Irigaray, 1991: 353)

In her analysis of her discussion board transcripts, therefore, LeCourt reveals the ways in which they demonstrate this 'otherness' through the Irigarayan concepts of *parler femme* ('speaking (as) woman') and mimicry.

Parler femme operates in a way which disrupts the unity of the speaking voice (the monologic enunciation of the *I* demanded by phallocentric discourse) by the speaker taking up multiple subject positions in a way which resists this unified ideal. In concrete terms, LeCourt shows how, within the discussion board, there are many examples of individual students taking up multiple subject positions – expressing multivocality – not only across postings but within single contributions to the discussion space.

Irigaray's concept of mimicry involves women in purposely speaking within the role allotted to them by patriarchal discourse, but in a way which works to 'convert a form of subordination into an affirmation, and thus begin to subvert it…it means to resubmit herself…to ideas about herself that are elaborated in/by a masculine logic, but so as to make 'visible' by an effect of playful repetition, what was supposed to remain invisible' (Irigaray 1985 quoted in LeCourt 1999: 159). Thus LeCourt shows how her students pursue this strategy within the discussion group, turning 'subordination into affirmation' 'in response to both the discursive contexts set up by other postings and the contexts of academic discourse within which the discussion group is embedded' (159).

In summary, LeCourt describes how the online classroom has the potential to become a 'feminized textual space'. Within her classroom, '[students'] voices were heard, their discourse resisted reincorporation and silencing within already constituted discourses, and "new" subject positions were momentarily created that granted students power over how others had positioned them' (172).

Critique

LeCourt attempts to employ the specificities of the digital medium in devising a pedagogy which works with the modes of subjectivity enabled in electronic space. To this extent she describes a valuable emergent digital pedagogy. In the end, however, her attempt to create a pedagogy specific to the digital classroom is hijacked by her own emancipatory agenda, in that she expresses an explicit desire and expectation that the resistant discourses she describes will cross over into the face to face classroom where they will have *true* liberatory power. My own view is that it is the combination of pedagogical approach and technological environment which works to constitute the learning subject in a way that makes such articulation of the multiple possible. By contrast, LeCourt appears to expect that the modes of discourse emerging online might simply be translated into other (face to face) discursive contexts. Unsurprisingly, LeCourt finds that this is not the case – the resistant subject positions her students take up online do not translate into a more 'liberated' face to face classroom.

LeCourt's perspective suggests that the enunciation of 'difference' is a worthy liberatory aim, as long as it is expressed consistently! Such a position both contradicts itself and privileges the face to face mode, relegating the online environment to the status of a training ground for 'real' emancipation. Students are safely returned to their 'true' identities at the end of the programme, 'unmasked' for the purposes of assessment (LeCourt – like Landow and Ulmer – is vague about her criteria for this), and placed securely back in the realm of the real. This viewing of the cyberspace classroom as a means to an end firmly re-rooted in the knowabilities of the face to face mode has more in common

with crudely instrumental approaches to 'e-learning' than perhaps it would want to admit.

An additional criticism revolves around the ambiguity of LeCourt's perception of where 'the feminine' is located. While acknowledging that it is not only articulated by subjects inhabiting female bodies (159), and explaining that both female *and* male students worked to speak the feminine in the discussion group (171), she refers throughout her discussion to students by their biological gender rather than in the generally gender-neutral terms reflected in the pseudonyms the students chose for themselves. Further, her liberatory agenda does tend to focus on those students who are biologically gendered as females:

> How might such new forms of textuality create the opportunity for my female students to literally refashion their voice such that they are accorded more power not only online, but also in classroom discussion? (LeCourt, 1999: 157)

From her positive engagement with the online space as somewhere where bodies are not the defining principle through which discourse is interpreted, LeCourt in the end falls back on a position which privileges biological gender – an odd position particularly given that she advocates 'turning our analytical lens away from reified concepts of gender to the discursive and linguistic grounds through which these positions are created' (156). Again, such a perspective fails to engage with the possibilities of the cyberspace classroom as a new cultural space, where resistance might take different forms from those we are familiar with from critical accounts of the face to face classroom. Adopting an alternative perspective such as that envisioned by Haraway (Haraway, 1991a) would enable us to begin to see the digital learning space from a more radical stance, as a site where gender might be rearticulated – indeed LeCourt's own online students all presented themselves under names which were either gender neutral or which suggested the opposite gender. In such a space, feminine modes of discourse might be spoken by cyborg entities of ambiguous gender, and the secure binaries defining gendered subjects might begin to be disrupted.

Summary

The pedagogical approaches I have described and critiqued demonstrate – in three very different ways – how it is possible to weave the specificities of digital text into a teaching method. Such methods, despite their flaws, work to question the assumptions, inherited from the print-dominant and face to face modes, of what constitutes the academic task. They also make a beginning in reformulating that task in terms of pedagogic and academic discourses and methods which are 'born digital'. These approaches are theoretically and pedagogically complex. As one (American) commentator on Ulmer's method points out, any teacher adopting it 'will be either courageous or tenured, and probably both' (Dickson, 2003). Almost nothing could be further from the instrumentalist ideal which positions 'e-learning' as an efficient and cost-effective means of delivering teaching to mass audiences of students. It is towards this ideal that I now turn, as I discuss the possibility of digital pedagogy in terms of the virtual learning environment, or 'e-learning system'.

Part 2: Virtual learning environments and the striation of web space

The striated and the smooth

For the second half of this chapter I would like to locate my discussion of digital pedagogy within the terms provided by Deleuze and Guattari in their description of smooth and striated cultural spaces (Deleuze and Guattari, 1988). Smooth space is open space, what Deleuze and Guattari call 'nomadic', in opposition to the striated which is space of closure – 'sedentary', bordered 'State' space:

> The space of nomad thought is qualitatively different from State space. Air against earth. State space is 'striated', or gridded. Movement in it is confined as by gravity to a horizontal plane, and limited by the order of that plane to preset paths between fixed and identifiable points. Nomad space is 'smooth', or open-ended. One can rise up at any point and move to any other. Its mode of distribution is the *nomos*: arraying oneself in an open space (hold the street), as opposed to the *logos* of entrenching oneself in a closed space (hold the fort). (Massumi, 1988: xiii)

The certainty and stability of *logos* which inhabits striated space – the Word, law, the 'metaphysical signified', the 'word of the citadel, the fort, the court, the boss, the suits' – is opposed here to the wandering, metamorphosing *nomos*, the 'word of the street' (Mahoney, 2002). Where smooth space is informal and amorphous, striated space is formal and structured. Striated space is associated with 'arboreal', hierarchical thought[9], which Deleuze and Guattari oppose to 'rhizomatic' thought – non-hierarchical, underground, multiply-connected. The figure of the former is – obviously – the tree; the latter might be represented by grass.

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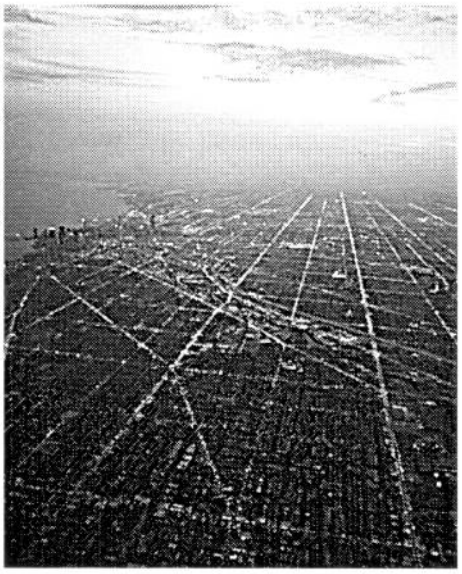
[9] 'We're tired of trees. We should stop believing in trees, roots, and radicles. They've made us suffer too much. All of arborescent culture is founded on them, from biology to linguistics.' (Deleuze, G. and Guattari, F. (1988) *A thousand plateaus: capitalism and schizophrenia,* Massumi, B., London: Continuum.)

Movement happens differently within each of these spaces. Smooth space is a space of becoming, of wandering (nomad space), where the movement is more important than the arrival. In striated space, what is most important is arrival at the point towards which one is pointed:

> Of course, there are points, lines, and surfaces in striated space as well as in smooth space… In striated space, lines or trajectories tend to be subordinated to points: one goes from one point to another. In the smooth, it is the opposite: the points are subordinated to the trajectory. (Deleuze and Guattari, 1988: 478)

Arachne's tapestry – the cyborg space of metamorphosis and flux – might be seen as a smooth space, where Athene's vision of the working of the Law and the stability of hierarchy is a representation of the striated. The technological model Deleuze and Guattari provide as illustrative of these two types of space is itself one of textiles. Here however, woven fabric is necessarily a striated space, with its gridlike form consisting of intersecting warp and weft. It is a space of closure: 'the fabric can be infinite in length but not in width, which is determined by the frame of the warp; the necessity of a back and forth motion implies a closed space' (475). Finally, it bears within itself a hierarchy, a top and a bottom. By comparison, felt (the fabric of the nomads) is an 'anti-fabric' representing smooth space:

> It implies no separation of threads, no intertwining, only an entanglement of fibers… An aggregate of intrication of this kind is in no way *homogeneous*: it is nevertheless smooth, and contrasts point by point with the space of fabric (it is in principle infinite, open, and unlimited in every direction; it has neither top nor bottom nor center; it does not assign fixed and mobile elements but rather distributes a continuous variation). (475-6)



6. Chicago

7. Ocean

Within the musical model, the striating functions of warp and weft are replaced by harmony and melody, while:

> the smooth is the continuous variation, continuous development of form; it is the fusion of harmony and melody in favor of the production of properly rhythmic values. (478)

While the desert, steppe, or ice (unpossessed, metamorphosing, open) are representative of smooth spaces, the sea is 'smooth space par excellence', subject to striation within the maritime model by the principles of navigation – meridians and parallels, longitude and latitude. If the sea is the ultimate figure of smooth space, the extreme of striation is the city (481).

What is important about this conceptualisation of space is not so much the way the two types of space are opposed to each other as their tendency to *pervade* each other – for striation to appropriate the smooth, and for the smooth to emerge from the striated.

> What interests us in operations of striation and smoothing are precisely the passages or combinations: how the forces at work within space continually striate it, and how in the course of its striation it develops other forces and emits new smooth spaces. Even the most striated city gives rise to smooth spaces: to live in the city as a nomad, or as a cave dweller. Movements, speed and slowness, are sometimes enough to reconstruct a smooth space. (500)

In the following sections I consider internet learning spaces as arenas in which smoothness and striation interact. If I talk of the web as a space where the

smooth has a tendency to emerge and be nurtured, it is not with the view that such space is necessarily freer or truer, but that it is a location where *things are different*. The point I attempt to make throughout this thesis is that such difference is as likely to make the task of online learners and teachers more problematic, or problematic in unfamiliar ways, as it is to offer the welcoming possibility of freedom from logocentric constraint. Thus the closing passage of Deleuze and Guattari's essay makes for me the most vital point:

> Of course, smooth spaces are not in themselves liberatory. But the struggle is changed or displaced in them, and life reconstitutes its stakes, confronts new obstacles, invents new paces, switches adversaries. Never believe that a smooth space will suffice to save us. (500)

Cyberspace: smooth or striated?

According to Herman and Sloop there was, in the early days of the internet, a tendency among theorists to take a utopic view in which cyberspace is seen as:

> a 'smooth' space of interstitial nomadic movement and fluid subjectivity, in contrast to the 'striated' space of logocentric constraint and embodied stability of the so-called 'meatscape' reality on this side of the screen. (Herman and Sloop, 2000b: 81)

Later theorists are more circumspect. Nunes, for example, identifies two articulations of cyberspace – one striated, one smooth – as expressed in the two popular metaphors, 'surfing the net' and (the even now archaic) 'cruising the information superhighway'. The 'topographies' revealed by these metaphors are very different. The former suggests one that is 'fluid, plan-oriented, and unbounded' (i.e. smooth), while the latter is 'linear, point-oriented, and Cartesian' (Nunes, 1999: 62).

Nunes makes the important point that such metaphors do not simply describe cyberspace – as topographies they function as 'performative speech acts that simultaneously map and create a territory' (Miller, 1995 quoted in Nunes 1999:

61). Thus, 'a striated 'highway' topography determines cyberspace as a system of regulated connections between determined points on dedicated lines; conversely, a smooth 'plane' topography 'writes' a cyberspace of fluid transit and continual passage' (Nunes, 1999: 61). The metaphors we use in our conception of internet spaces are more important to us as users than the material configuration of the network.

For Nunes, striated cyberspace is that which functions instrumentally, organising functionality into productive modes:

> Striated cyberspace sets out to function as a simulated world that overcomes real space by providing more direct (point to point) contact and therefore greater efficiency. (63)

The primary example he uses of striated internet space is the MOO – virtual-textual collaboratively produced online 'worlds' – though he also sees email, telnet and ftp (file transfer protocol) as striating functionalities within cyberspace. Such applications:

> create and reveal a cyberspace of definite sites and point to point contact. In each of these applications, an address serves as a destination or a resting place, not a relay; with ftp and telnet in particular, 'arriving' is followed by logging 'into' the site, calling to mind again Mitchell's notion of inhabitation in a virtual city. (70)

Likewise, the online chatroom constructs an arboreal or hierarchical environment in which striated architectural space – 'the image of the walled-in city' – functions as a metaphor for our inhabitation of a system which, because it is closed, may also be regulated.

By contrast the web, for Nunes, works as a smooth space in which:

> hypertextual links create a nomadic 'local absolute' (Deleuze and Guattari, 1988: 382). The 'unfolding' of each page onto another both creates and reveals a smooth topography. The interface encourages users to navigate this space primarily by way of drift: 'browsing' from link to link, rather than moving from destination to destination. 'Homepages', in other words, function less as

> architectural homes than as points of passage in a multiplicity.
> (Nunes, 1999: 70)

These characteristics of movement within hypertextual space resonate with Deleuze and Guattari's description of movement within smooth space, '...a local integration moving from part to part and constituting smooth space in an infinite succession of linkages and changes in direction. It is an absolute that is one with becoming itself, with process. It is the absolute of passage...' (Deleuze and Guattari, 1988: 494).

Though he might have mentioned that to 'navigate' a space is, for Deleuze and Guattari, to begin the process of striation, Nunes offers the image of the old Netscape ship-wheel as a representation of the possibility of smooth movement over a nomadic or oceanic cyberspace. The admittedly evocative 'navigation' image of the old logo has now, mystifyingly, been replaced by the confidently striding, spikey, serifed N which straddles the open landscape (desert, steppe?) like Shakespeare's colossus:[10]

Nunes is not alone in suggesting that the hypertextual environment of the web might be a manifestation of smooth space. Landow (Landow, 1994) and Moulthrop (Moulthrop, 1994) both see hypertext as a potential locus for the emergence of smooth space and rhizomatic thought. While Moulthrop, for reasons discussed below, is rather tentative about this link, he has by contrast little difficulty in viewing print technology as a purely striating medium:

> Socially, striated space manifests itself in hierarchical and rule-intensive cultures, like the military, the corporation, and the

[10] Perhaps this image of purposeful dominance reflects the appropriation, since its early days, of the web landscape by the striating forces of corporate interest and instrumentality.

> university. As Marshall McLuhan observed, the dominant medium of communication in such cultures – print – fosters an objectified and particularized view of knowledge. Striated space is defined and supported by books. (303)

This argument is of course undermined by the fact that *A Thousand Plateaus* – constructed by Deleuze and Guattari as a rhizome, as a space where a nomadic reader takes a smooth trajectory between chapters, resting places or 'plateaus' – is, in fact, a printed book, however much the early theorists would like to lay claim to it as an 'incunabular' or 'proto-' hypertext.

Moulthrop's paper is written in response to a rather despairing chapter by Martin Rosenberg which appears in the same book (Rosenberg, 1994) and which questions the extent to which hypertext systems (including the web) can be considered as smooth spaces. Rosenberg's contention is that hypertext in both art and pedagogy, however liberatory the intentions of its creator-user, can only ever function to re-enact logocentrism in the sense that hypertext itself depends upon routinised, rule-driven systems:

> anything produced out of a systemic relationship between lexias and links, cards, buttons, and fields also participates in the same geometrical episteme that produced Newton's laws and classical stasis theory, Feynman diagrams of subatomic particle interactions, formal logic, computer languages, and the fractal scaling of seacoasts, black holes, and chess. (278)

Having designed a pedagogical hypertext tool – RHIZOME – with the at least partial aim of empowering students through enabling them to engage in new modes of critical thought, Rosenberg is left with the conviction that such strategies do no more than reinforce the logocentrism they attempt to subvert. Hypertext structures are in the end in support of the *logos* rather than the *nomos*. Inherently striated, they are 'always edifices, never autonomous zones; they are structures that do not allow for deterritorialization. No technologically mediated link can ever constitute a genuine line of flight' (Moulthrop, 1994: 310). As one contributor to the Deleuze and Guattari discussion list asserted:

> My argument is that if the net functioned as a rhizome, links would not (could not) exist in the sense that a given set of letters/numbers/symbols always points at one and only one place from whatever other place you're at. The whole POINT of the Web is that there IS a centralized structure of control so you can make these connections.
>
> To some extent, yeah, control of the Web is local. At the same time, there *are* centralized structures of control (i.e. Nameservers, IP, etc. etc., reflected in the local sites by firewalls, passwords, etc. etc.). Ignoring these is ignoring the part of the Web that makes it work... (Myers, 1995)

The web – nomadic, open, rhizomatic for some – is cast here as a closed and hierarchical space of striation, destined by its very structure to undermine any attempt to use its spaces for anti-logocentric thought. I would hold that there is a determinism at work in both views which goes against Deleuze and Guattari's original conceptualisation. The web is, like the printed book, neither inherently striated nor inherently smooth, and even if it *were* an open steppe of pure smoothness, that would not make it inherently liberatory.

One element of my discussion with students was to talk about the metaphors they would use to describe the web. I present two of the most powerful responses to this question here, since they represent the possibility of both smoothness and striation within web space. Though neither of these students were familiar with Deleuze and Guattari's conceptualisation, one offers the metaphor of the city – 'striated space par excellence' (Deleuze and Guattari, 1988: 481) – while the other describes the epitomisation of the smooth – the ocean – the 'local absolute' in which 'there is neither horizon nor background nor perspective nor limit nor outline nor form nor center' (494).

The sea

thinking about the web, what kind of metaphor would you use to describe the web, y'know what's it like?

[pause] em, [pause] em, a wave probably, a wave, like an ocean, cos it's so massive, that when you're in one particular place, you can't see how massive it is, you can't, say not like you're looking at it from far away, say you're on an ocean in like say a boat or something, and you're looking towards, you, and you can't see the land but you know it

doesn't look that far away you know you don't, you just think you know you're in this place and you can only see as far as your eyes let you see but, I mean it doesn't seem that far but you can't sort of see how far away it is, and I think that's the way with the internet cos you can't forsee how, just how massive it is and just how many things you can do and stuff, I think like a wave, sort of shows that it's it's got really good points and it's got really bad points and it's like the ocean with how it's so big.
Marina

The city

but the web I think of you know with graphical browsers it's a different metaphor, I think of it probably more as a in a kind of urban way, y'know as a kind of city or cities. y'know I think of it almost as kind of geographical areas, intellectual areas in a sense that you can travel in and around, and there are places you kind of recognise and are more familiar, um and you know that they lead on to other places but beyond that you don't know where they go just like, y'know in a big city you know bits of it and uh but then there are other bits you don't. y'know if you go down that road you don't know where it goes. and then sometimes you come out somewhere where you've been before and think 'o I'm here again'. so you need another, you know, that suggests a kind of geographical space which you can cross in a linear way which I know technically is totally wrong but I think that's how I feel when I'm in it, it's a kind of urban social space in that sense with lots of spaces and sites and interesting things in it [pause] and I like travelling around it [laughs].
Richard

What is most powerful in the description given by Deleuze and Guattari is, as I have stated, not the opposition of the two terms but the ways in which they describe the two spaces as appropriating and emerging from one another:

> the sea is a smooth space fundamentally open to striation, and the city is the force of striation that reimparts smooth space, puts it back into operation everywhere, on earth and in the other elements, outside but also inside itself. (Deleuze and Guattari, 1988: 481)

Thus I would hold that the discussion about the striated nature of the network is of little relevance. Even if web architecture is pure striation, this does anything but place a limit on the possibility of smooth space emerging from within it. I suggest that there are elements in the way we use and conceive of the web which construct it as smooth space. This smoothness consists in its openness, its instability and tendency to metamorphosis, its resistance to regulation, its governing logic of access rather than possession, the unknowability inherent to its vastness, its un-mappability, and the tendency – described in the previous chapter – to engage with it as a space of surfaces, to skim and glide over it, for

our reading of it to be a question of our movement over its spaces with the sense that, wherever we choose to pause, arrival at a final destination is always postponed. The digital pedagogies described in this chapter attempt to position themselves in these smooth spaces. At the same time, however, there are strongly striating elements within the web, of which the virtual learning environment – discussed below – is one example.

Teachers attempting to devise pedagogies for smooth web spaces may be working with the grain of the medium's most distinctive features, but they are likely to be working against the grain of their institutions and the broader social contexts within which higher education is embedded. As Moulthrop points out, the university – hierarchical, contained – is itself a striated space (though of course that does not mean that there cannot be smooth spaces within it). If Rosenberg's concern with the striated architectures of hypertext is over-stated, he does powerfully reveal the paradox inherent in all attempts to teach according to the *nomos* rather than the *logos*:

> no matter how self-conscious I may be in critiquing the social costs of logocentric thinking..., as a teacher I recognize that logocentric thought is precisely what my students need to master as a discourse that empowers them in the world. (Rosenberg, 1994: 293)

The digital pedagogies I discussed earlier in this chapter attempt – perhaps to different extents – to inhabit smooth space, yet ultimately each is embedded within a context of striation. The compromises involved in this appear perhaps most noticeably in the way Landow, Ulmer and LeCourt deal with the issue of assessment which, in each case, is skipped over with minimal comment and little analysis. This tendency to evade the implications of the hierarchies and formalities inherent to assessment procedures is, according to Reynolds and Trehan, common to many critical approaches (Reynolds and Trehan, 2000). If smooth pedagogy works to enable students to take a nomadic line of flight, to experience the pure joy of passage, assessment – in its summative form at least – will always be one of the factors working to constitute an end point or *telos*, a place of arrival.

However I do not believe that despair such as Rosenberg's is an appropriate response. As Deleuze and Guattari reveal, to move within smooth spaces is not necessarily to move with ease – 'Voyaging smoothly is a becoming, and a difficult, uncertain becoming at that' (Deleuze and Guattari, 1988: 482). This thesis is dedicated largely to exploring the complications of this becoming, complications which demand a response neither despairing nor nostalgic:

> It is not a question of returning to preastronimical navigation, nor to the ancient nomads. The confrontation between the smooth and the striated, the passages, alternations and superpositions, are under way today, running in the most varied directions. (482)

To be aware of these contemporary 'confrontations' and 'superpositions' is to begin to work with them positively. Within the context of learning and teaching, perhaps the most significant confrontation between the two spaces is taking place at the locus of the virtual learning environment, where the smooth spaces of the web are resisted in favour of a striation which meshes closely with the university as a striated institution. I move now to consider the virtual learning environment – or 'e-learning system' – as a striating element within web space.

A city on the steppe: the virtual learning environment as striated space

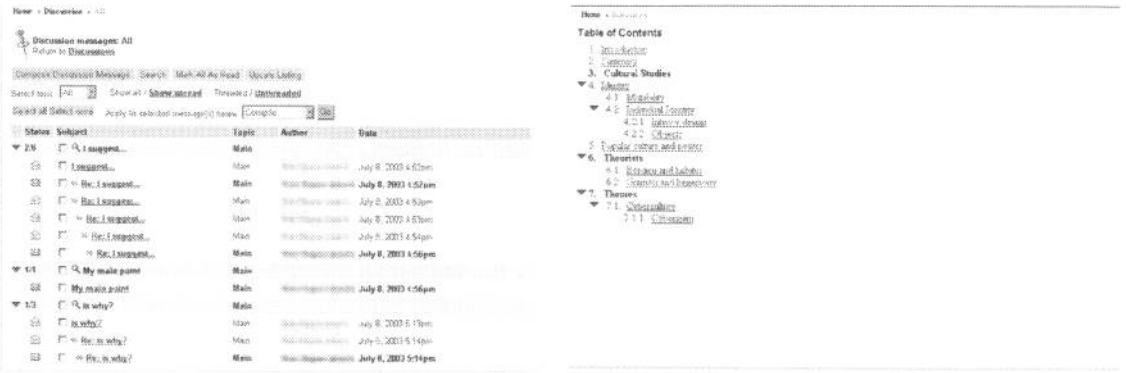
If debate has raged over the extent to which the web in general forms smooth or striated space, few doubts can exist in relation to that element of the web which consists of the virtual learning environment – it is a space of pure striation.

Deleuze and Guattari's account of the technological model of striated space includes four elements, applied in their case to woven textiles, which characterise such spaces. First, they are 'constituted by two kinds of parallel elements' which – point two – 'have different functions; one is fixed, the other mobile' (Deleuze and Guattari, 1988: 475). In textile production these two elements are the warp and the weft; in online learning they are the intertwining,

intersecting elements of a fixed software architecture and the mobile, 'customisable' learning space which is woven in and around it.

Third, 'a striated space of this kind is necessarily delimited, closed on at least one side' (475) – that is, points of entry and exit delimit the structure of the virtual learning environment much as the frame of the warp delimits the width of the fabric. The point of entry is the password logon, what Nunes calls the 'passage through the cybercity gates' (Nunes, 1999: 71). Movement within the striated space of the virtual learning environment is thus constrained to a back and forth motion within a closed space, much as the shuttle moves through the growing fabric.

Finally, 'a space of this kind seems necessarily to have a top and a bottom' (Deleuze and Guattari, 1988: 475); in other words, it bears within itself a series of formal hierarchical principles. We see these articulated throughout the interface of the virtual learning environment, from the way it structures text (assuming a hierarchical organisation of sections identical to that found in print books), to its discussion fora and the way it organises its users.



8. Threaded discussion and table of contents in WebCT

Where the MOO, Nunes' prime example of striated cyberspace, organises users into a hierarchy of 'builder, programmer and wizard', in WebCT – the software to which I limit my discussion here – we have the administrator, course designer, teaching assistant and student (in that order).

As Deleuze and Guattari state, 'one is never "in front of", any more than one is "in"' smooth space – rather, one is 'on' it (493). Likewise, though we describe ourselves as being 'on' the web, we are always 'in' the virtual learning environment. It builds a city on the steppe, a 'safe' space of enclosure or containment. 'E-learning systems' promise 'seamlessness' of integration with other university information systems – the elimination of gaps into the unregulated unknown and the delimiting of space is their very purpose. Regardless of whether or not there are pedagogical advantages to be gained from delimiting web space in this way, it undoubtedly defines a domain in which control can be exercised in the form of regulation and surveillance (the coda to this chapter expands on this theme). Here, as Nunes puts it, functionalities are organised into productive modes and efficiency becomes a key term:

> Striated cyberspace sets out to function as a simulated world that overcomes real space by providing more direct (point to point) contact and therefore greater efficiency… A determined striated

> topography, then, is 'efficient' in capturing smooth space and transforming it into a mode within its regime. (Nunes, 1999: 63-67)

WebCT, for example, has shifted from a position in which it might have claimed to 'enhance' or 'support' learning, to one in which it promises a 'transformation' of the 'educational experience' (WebCT, 2002). Yet such 'transformation', far from promising an engagement with what we might call smooth cyberspaces, promises to take place purely in terms of enhanced efficiency and productivity:

> students [now] require educational programs offered at convenient times and in modes that maximize learner efficiency.
> ...
> Increasing demands on faculty and student time, together with decreasing funds (particularly for capital projects), require institutions to provide Internet-based alternatives to classroom learning and collaboration.
> ...
> students [now] bring an increasingly consumerist attitude to their education. They demand a return on their educational investment and are more likely to measure the value and success of a course or program based on how it contributes to their career advancement.
> ...
> The market for higher education is seeing a rush of new competitors that target learners with degree programs designed specifically to meet their immediate need for convenience and career advancement. (2)

In this 'regime' the student moves with maximum efficiency between the point of entry to the system to the point of completion – a point-to-point progression characteristic of movement within striated space. Yet the containment of the student within the closed space of the system does not end with completion of the programme of study. WebCT promises to:

> Encourage students to leave 'tracks' in the system – notes, papers, projects, etc. – that help the institution to maintain an ongoing, dynamic relationship with the student, and make the institution the most logical choice for further education.
> ...
> Each student has a single point of entry to every institutional offering that's most important to him or her, a point of entry that

> reflects what the system learns about the student over time and serves as a lifetime learning resource.
> ...
> the more personalized the online learning experience becomes – the more entrenched the student becomes in the institution. (2-3)

Using the language of choice, convenience, and personalisation, the promise is made of a new generation of students constituted by 'advanced e-learning systems' as their 'natural', *lifelong* inhabitants. From the image of the student as a spider, offered in chapter two, we have moved to that of the student as fly. The implications of surveillance within these systems for the constitution of students' subjectivities is taken up again in the coda to this chapter.

Conclusions

I began this chapter with a discussion of three approaches to learning and teaching online which I called 'emergent digital pedagogies' in that they attempt to work with the capacity of internet spaces to reconstitute textuality and the subjectivity of its users. In the light of the subsequent discussion, it is possible to see these pedagogies as attempting to inhabit the smooth spaces provided by the internet – though perhaps only Ulmer is explicit about holding this as an aim.

While it would be a mistake to too firmly align the possibility of digital pedagogy with one theoretical stance, these approaches were characterised by their attempt at anti-logocentrism, by a concern with the shifting, nomadic nature of students' subjectivities, and by the at least partial occupation of open, fluid space. Each attempts to conceive of the academic task as something which is altered by its association with digital media, attempting to use digital space as an arena in which pedagogies alternative to those defined by print and face to face norms may be attempted. Each at least nods towards the possibility of a shift in the teacher-student hierarchy. In contrasting such movements over smooth space with the striated pedagogical spaces offered by the virtual learning environment, the latter is revealed as constructing a space of closure, of

regulation – a formal, structured domain of control where hierarchies are re-asserted and internet functionality is appropriated by a regime of productivity and efficiency.

In highlighting Rosenberg's paradox, I described how the smooth spaces of digital pedagogy are, inevitably, appropriated by the forces of striation and logocentrism in the form of – among other things – assessment. According to Deleuze and Guattari it is equally inevitable that the striated space of the 'e-learning system' give way to areas of smoothness. Much as 'it is possible to live striated on the deserts, steppes, or seas; it is possible to live smooth even in the cities, to be an urban nomad' (Deleuze and Guattari, 1988: 482).

Yet it is rather hard to see where the virtual shanty-town might emerge among the regulated avenues of the 'e-learning system'. At a practical level, the simple strategies of hypertext and hypermedia creation employed by Landow and Ulmer are not available within the strictly defined functionalities of the virtual learning environment, while LeCourt's strategy of anonymised discussion, though it is technically possible in WebCT, is scarcely viable in a system dedicated to the tracking, management and containment of individualised users. The conclusion might be drawn that – unless they are unfortunate enough to be working within an institution in which use of the virtual learning environment is compulsory – teachers and students interested in inhabiting and nurturing smooth online pedagogical spaces will not bother to engage with the constraints offered by such systems. However, as 'fully integrated learning systems' become increasingly widely used, and increasingly 'seamless' in their closure, nomadic spaces will no doubt emerge within them – even if these are not inherently liberatory, the nurturing of them is likely to represent a true challenge to learners and teachers.

It is my wish not to succumb to the temptation to cast striated space as 'bad' space and smooth space as purely 'good', nor to be lured into the deterministic stance which holds that regulation and striation represent the strangulation of

the somehow 'natural' free-flow of information within cyberspace (Nunes, 1999: 65). Pedagogical cyberspaces consist, like other spaces, in the play of the two topographies, and occupation of a formal, regulated space is likely sometimes to be pedagogically desirable. However I do hold that smooth cyberspaces offer the promise of a textual, subjective and epistemological openness which presents new possibilities for teaching and learning – possibilities which are likely to be as disturbing as they are engaging. Yet if our social and institutional contexts require us to undertake the regulated movement from point to point, the back and forth of the shuttle within the warp and weft, we may still, where we can, look toward the smooth line of flight within open territory, toward the nurturing of spaces where we might undergo the 'absolute of passage' (Deleuze and Guattari, 1988: 494).

5a coda[1]

Surveillance and the subject in virtual learning environments

em and plus at the end of the first year [laughs] at the end of the first no not at the end of the first year, yeah it was at the end of the first year em the course lecturer for the module gave you feedback on eh how you had been and eh he was able to they were able to tell you how many times you'd been in the WebCT, they were able to tell you how many times you had went into the discussions, how many times you went into the mail, the chat all that kind of thing. and they give you a rundown on the numbers compared to everybody else, and mine was way up through the roof!

really?

yeah, compared to everyone else's! so it was really quite an embarrassment then because you were like 'o my goodness, I'm the class swot'! [laughs]
Karen

Tracking students in virtual learning environments

Murray Goldberg, WebCT originator, asks in his online newsletter, 'It's 10pm, do you know where your students are?' (Goldberg, 2000). He goes on to describe how the rationale for the development of the student tracking tools in WebCT grew out of his own experience of teaching online. The tools are, indeed, extensive. WebCT allows tutors to track the date and time of students' first and last logins, which pages each individual student has accessed and when, the total number of times the student has accessed the system, and for every section of the course to track the number of discussion board articles each student has opened and the number and date of each student's own discussion board contributions.

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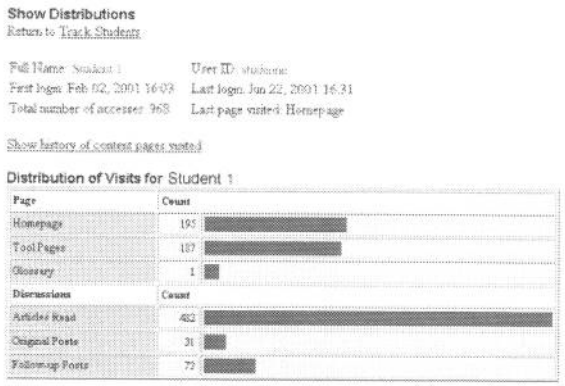
[1] A version of this coda, extended by my co-author, was published as Land, R and Bayne, S (2002) 'Screen or monitor? Surveillance and disciplinary power in online learning environments' in Rust, C. (ed) *Improving Student Learning using Learning Technology*. (Oxford, OCSLD). pp.125-138. A copy is attached at the end of the thesis.



Show Distributions
Return to Track Students

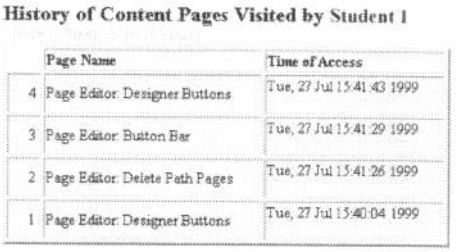
Full Name: [redacted] User ID: [redacted]
First login: Feb 02, 2001 16:03 Last login: Jun 22, 2001 16:31
Total number of accesses: 968 Last page visited: Homepage

Show history of content pages visited

Distribution of Visits for Student 1

Page	Count
Homepage	195
Tool Pages	187
Glossary	1
Discussions	**Count**
Articles Read	482
Original Posts	31
Follow-up Posts	72

9. WebCT: date and time of one student's first and last login, total number of accesses and hits to each content page



History of Content Pages Visited by Student 1

	Page Name	Time of Access
4	Page Editor: Designer Buttons	Tue, 27 Jul 15:41:43 1999
3	Page Editor: Button Bar	Tue, 27 Jul 15:41:29 1999
2	Page Editor: Delete Path Pages	Tue, 27 Jul 15:41:26 1999
1	Page Editor: Designer Buttons	Tue, 27 Jul 15:40:04 1999

10. WebCT: history of pages visited by student, with dates and times

Class records can be generated allowing tutors to organise their students according to frequency of accesses to the course, by date of first or last access, or by the number of discussion board items opened or posted.

Student Records

To sort by a category, click the category heading.
For more statistics on an individual student, click the student's name.

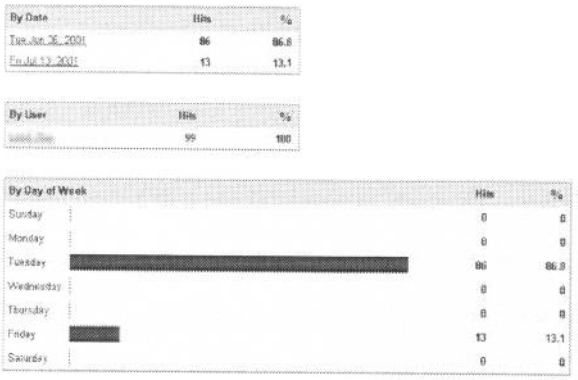
Page: All Previous Page Next Page

Personal Information		Access Information			Articles	
Full Name	User ID	First Access	Last Access	Hits	Items Read	Posted
[redacted]	[redacted]	Mar 23, 2001 17:11	Apr 24, 2001 14:07	33	17	0
[redacted]	[redacted]	Feb 09, 2001 14:24	Jul 13, 2001 14:37	127	52	3
[redacted]	[redacted]	Feb 05, 2001 22:16	May 10, 2001 15:10	139	48	0
[redacted]	[redacted]	Feb 10, 2001 06:18	Jul 03, 2001 12:20	146	114	21
[redacted]	[redacted]	Feb 05, 2001 13:52	Jun 04, 2001 13:31	153	112	19
[redacted]	[redacted]	Feb 07, 2001 11:05	Jun 15, 2001 16:35	219	115	9
[redacted]	[redacted]	Feb 05, 2001 11:34	May 28, 2001 09:06	249	157	26
[redacted]	[redacted]	Feb 02, 2001 10:37	Apr 10, 2001 12:43	264	88	10
[redacted]	[redacted]	Feb 06, 2001 19:43	May 18, 2001 15:01	316	179	17
[redacted]	[redacted]	Feb 05, 2001 12:43	Jun 13, 2001 13:25	332	181	15
[redacted]	[redacted]	Feb 02, 2001 16:03	Jun 22, 2001 16:31	968	482	103

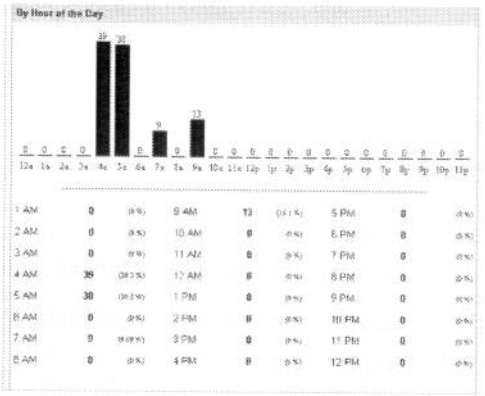
11. WebCT: list of students organised by number of times they have accessed course

WebCT's main out-of-the box virtual learning environment rival, Blackboard, has a similar suite of surveillance tools, enabling records to be generated showing for each individual user the total number of accesses to the course as a whole, the total number of accesses to each individual area and page of content, number of accesses over time, accesses per day of the week and by hour of the day. With both systems the tutor can also, of course, keep permanent records of

the more obviously 'visible' activities undertaken by the student – the number, time and quality of contributions to discussion boards, emails exchanged between tutor and student, results from online quizzes (those intended for self- or formative assessment as well as those which are summative).



12. Blackboard: number and date of hits to a particular section of course by one user



13. Blackboard: number of the user's hits to a particular section by hour of the day

These tools are far more than the electronic equivalent of the attendance sheet. As in so many arenas, computers have enabled us to do things that were previously impossible. These surveillance tools record every move a student makes within the learning space, provide intimate details of every student's working hours and patterns of study. Where such a virtual learning environment, or 'e-learning system', is integrated with wider institutional information systems, anyone wishing to generate a student record walks through an even richer information landscape. Similarly, system administrators may extract information at a similar level of detail from almost any networked activity, whether undertaken by students or staff. However, where previously to track activity within a web-based learning environment would have involved the deliberate, rather complex analysis of log files and server statistics (something for which the majority of teachers would have neither the time nor the inclination), within virtual learning environments surveillance is a casual act – sophisticated and detailed reports on individual students can be obtained with a couple of mouse clicks. Further, such tracking tools are included in learning environments as an integral element of their *pedagogical* functioning. Goldberg,

for example, describes how by enabling continual evaluation, such tools simply help him to be a better online educator, providing higher quality web-based courses:

> [the] benefit is all in the name of continually trying to improve my course offering, not only in response to direct student comments, but also in response to the way students are interacting with the course. Without this activity tracking I would be in the dark… (Goldberg, 2000)

The aim of this coda is not to deny the usefulness to tutors of such facilities, and I wish to avoid succumbing to the techno-paranoia which sometimes accompanies explorations of the impact of dataveillance. Rather I wish to make strange an element of online learning which risks becoming banal, a matter of 'common sense', and by doing so to explore some important cultural implications of using such tools. As McLuhan revealed, technology is not neutral: 'technological environments are not merely passive containers of people but are active processes that reshape people and other technologies alike' (McLuhan, 1962: iv). The wish to avoid accusations of technological determinism should not prevent us from looking closely at how our technologies change the way we work and the way we experience ourselves and others.

The focus of discussion in this coda is on the issue of power, and the power of technologies to constitute the subjectivities of their users. My approach here – taking as a starting point Foucault's analysis of the operations of disciplinary power – focuses not on university or state imperatives, strategic or otherwise, for the use of learning technology, but on a specific instance of a technology of power (the surveillance aspect of virtual learning environments) and the implications of its use within a localised context – the practice of learning and teaching. My aim is not to 'reveal' the relationship between surveillance in virtual learning environments and explicit managerialist imperatives or consciously hierarchical relationships of domination between learner and teacher. Instead I wish to explore how such tools operate to constitute their users as learning subjects.

The panopticon

The imagery of the panopticon is regularly drawn on in discussions of cyber-surveillance (for example see Bowers, 1988, Zuboff, 1988, Provenzo, 1992, Lyon, 1993, Spears and Lea, 1994, Gandy, 1996, Poster, 1996)[2] and does indeed provide a powerful metaphor for thinking about the way in which power relations are constructed in online environments.

Bentham conceived of the architectural innovation of the panopticon in the late eighteenth century as a way of achieving conformity and order within a 'humane' prison system (see Bentham, 1962). The panopticon is a circular building, in which the cells of the prisoners occupy the circumference. The cells are divided from each other in such a way as to prevent any communication between prisoners. At the centre is the 'inspector's lodge' or observation tower from within which prison guards can see into every cell, without themselves being visible. The goal is the achievement of control through both isolation and the possibility of constant (invisible) surveillance.

For Foucault (Foucault, 1979) the panopticon encapsulates in its form the shift in the nature of power relations which took place during the seventeenth and eighteenth centuries. Where previously what Foucault refers to as sovereign power had exercised dominion through punishment of the physical body (physical torture, public execution), during this time a different, less visible, power mechanism emerged which Foucault calls disciplinary power. Disciplinary power is exercised over individual and collective bodies 'through surveillance and via a grid or network of material coercions which effected an efficient and controlled increase (minimum expenditure, maximum return) in the utility of the subjected body' (Smart, 1985: 80).

The panopticon, as one of the 'technologies of power' of this regime, functions less through the imposition of physical force than through its ability to bring

about conformity through self-regulation. As subordinates are never sure when they are being observed, they have no alternative than to assume an unwavering surveillance and hence internalise the 'normalising regime'.

> He who is subjected to a field of visibility, and who knows it, assumes responsibility for the constraints of power; he makes them play spontaneously upon himself; he inscribes in himself the power relation in which he simultaneously plays both roles; he becomes the principle of his own subjection. (Foucault, 1979: 203)

Disciplinary power is not only manifested in the workings of penal institutions. For Foucault it is identified with the power-knowledge nexus which is inherent in the workings of institutions throughout the social sphere. Power is not, for Foucault, simply a matter of repression or domination, the property of a particular individual, or group, or class. Rather it is a constituent, circulating element of contemporary society. Power, like surveillance, is not necessarily 'bad', but it is dangerous, with effects which are both positive and negative. As Ball points out, for example, 'Education works not only to render its students as subjects of power, it also constitutes them, or some of them, as powerful subjects' (Ball, 1990: 5).

It is not surprising that those theorising the place of privacy in the information society have seized on Foucault's analysis and the panopticon metaphor, seeing in computerised and video surveillance a full realisation of the principles of the panopticon. Computerised student tracking systems like the ones described above do appear to represent the perfect disciplinary apparatus, the single gaze which constantly observes everything.

Surveillance for Foucault is an element of the hierarchical observation which is a key instrument of disciplinary power. Hierarchical observation binds the concepts of visibility and power. There is an unequal power relationship between the seer and the seen – the visibility of the seen enables the seer to

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[2] The majority of these discussions focus on surveillance and privacy in the workplace, the

'know' them, to alter them. Access to this knowledge, to this power, is of course unevenly distributed. In the everyday functioning of the virtual learning environment, the tutor, or 'course designer', has access to extensive surveillance tools, and the student does not.[3] Whatever truth there may be in claims that computer mediated communication has the potential to do away with many of the cues through which hierarchical relationships and status differentials are inscribed, the relation between teacher and learner is still (even necessarily) a hierarchical one, not least where the teacher is also the assessor. How comfortable should we be, however, with such ready, casual access to tools which so starkly represent the 'power of mind over mind' (Foucault, 1979)?

The subject

Hierarchical observation is only one of the instruments through which disciplinary power exercises itself. The two main others – normalising judgement and examination – are also well known to educators. Their collective effect is one of classification and division, rendering the subject 'knowable' through the collection of data relating to them. For Foucault, the file, the document and the record are powerful tools representative of the exercise of disciplinary power. It is partly through these that the individual is constituted, the subject objectified. The power to classify, to collect data relating to students, is hardly new in education, yet in the use of online surveillance tools we see it reaching a new level of depth and detail, representing a further extension of what Foucault calls the 'progressive objectification and the ever more subtle partitioning of individual behaviour' (Foucault, 1979: 178). As Provenzo points out, 'this desire to partition individual student behaviour into ever more subtle units – to systematically collect data – is built into the structure of many computer education programs' (Provenzo, 1992: 185).

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marketplace and in the functioning of the State, rather than on education *per se*.

[3] An interesting exception is the conferencing software FirstClass, in which the hardly extensive, but functional, 'message history' tool is equally available to both. 'Message history' allows users to track who has read any given message, and when.

Foucault writes against the idea of the sovereign subject, the view which sees the individual, the subject, as the foundation of knowledge and meaning. For Foucault, the subject does not exist prior to the exercise of power. Hence, within the panopticon, individuals are made to internalise the gaze of power, to adopt its values as their own, to conform. They are thus formed by power – rather than seeing it as an external force being applied to a pre-existing, stable subject, it is power which makes us who we are. Disciplinary power is an element of discourse, in which individual subjectivity is seen not as the possession of the conscious self, but as something which is dispersed throughout a network of external structures and practices:

> discourse is not the majestically unfolding manifestation of a thinking, knowing, speaking subject, but, on the contrary, a totality, in which the dispersion of the subject and his discontinuity with himself may be determined. It is a space of exteriority in which a network of distinct sites is deployed. (Foucault, 1966: 55)

Discourses are 'practices that systematically form the objects of which they speak' (Foucault 1974: 49) – in other words, the discourses of pedagogy create both the teacher and the taught; the discourse/practice of technology-assisted learning creates both the online learner and the teacher or facilitator of online learning.

In this scheme we can see disciplinary apparatuses or 'technologies of power' (of which the virtual learning environment is an example) as being about creating a *certain type of subject*; in using these technologies we are therefore also involved in creating a certain type of subject, a certain type of learner. For Lyotard, predicting back in 1979 the impact of technology on education, the kind of learner being produced would be one who, in the name of enhanced performativity, would be an efficient, skilled user of information (Lyotard, 1979: 51). In current learning technology discourse the kind of learner being produced is likely to be one who is 'active', 'independent', 'lifelong', and 'flexible'. Applying the Foucauldian approach in any case problematises the notion that it is possible to place 'the learner' at the centre of the learning

process. Instead, it would see the subjectivity of the learner partly as being constituted through and by the learning environment. The practices of 'student centred learning', particularly perhaps in their online manifestations, normalise students through surveillance, observation and classification but rarely explicitly acknowledge that the developing individual is an 'object' produced, in part, by those same practices, rather than a secure, pre-existing subject.

The superpanopticon

Cyberspace theory building on the work of Foucault highlights the way in which the virtual environment works to constitute the subjectivity of its users, restructuring the nature of individuality in the process. In his analysis of the impact on subjectivity of electronic databases, Poster describes the surveilling function of such technologies as the 'superpanopticon' (Poster, 1996). The superpanopticon constitutes individual 'subjectivities' according to its own rules. The example Poster uses is that of the electronic database, in which the fields and records containing an individual's details (name, age, sex), highly limited by the determinations of the technology, actually become the 'retrievable identity' of that individual. In other words, the data held on an individual becomes, to borrow a term from Baudrillard, a simulacrum of that individual – a copy which, as far as the imperative of the technology is concerned, has no original. For Poster therefore, computerised databases are 'nothing but performative machines, engines for producing retrievable identities' (186). What is more, the individual has no control over, or even awareness of, this 'other identity' which is circulating throughout the electronic network:

> Now, through the database alone, the subject has been multiplied and decentered, capable of being acted upon by computers at many social locations without the least awareness by the individual concerned yet just as surely as if the individual were present somehow inside the computer… To the database, Jim Jones is the sum of the information in the fields of the record that applies to that name. So the person Jim Jones now has a new form of presence, a new subject position that defines him for all those agencies and

> individuals who have access to the database. The representation in the discourse of the database constitutes the subject, Jim Jones, in highly caricatured yet immediately available form. (Poster, 1996: 188)

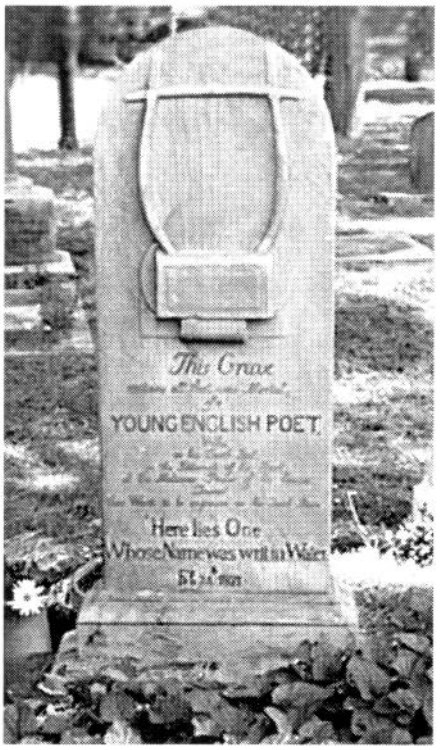
It would be a mistake to underestimate the extent to which this power to constitute and disperse the subject can be applied in virtual learning environments. While humanist ways of knowing might resist the idea that identity formation can take place outside the skin of the individual, we need to consider the possibility that the online student may be starkly objectified in her virtual construction, that 'the learner' may be, as far as our systems are concerned, constituted by records of their first login, last login, frequency of login, number of discussion board submissions and so on. Such an identity might be not only beyond the control of the individual learner, its very existence – and the possibility of 'judgement' being applied to it – might be unknown to them.

Foucault, particularly in *Discipline and Punish*, focuses on the concept of power-knowledge and the *body* as the object of the exercise of power, and it is here that theorists of cyberspace find his ideas do not go far enough. For Haraway, for example, Foucault 'names a form of power at the moment of its implosion' (Haraway, 1991a: 245). How can the power-knowledge-body equation stand up in the face of the possibility of disembodied subjectivity, of the incorporation of self with machine? If the body held a primary position within the regime of sovereign power (which exercised control through bodily punishment), being displaced to a secondary position by the emergence of disciplinary power, we see it relegated to a tertiary position by the power of new technology to blur the boundaries between self and network, to disperse the subject in cyberspace, to remove subjectivity from the body.

Chapter 6

Temptation, trash and trust: the authorship and authority of digital texts

Introduction



14. The death of the author – Keats' grave

I began chapter four with the story of the epitaph on the grave of the poet Keats, offering it as an appropriate introduction to the themes of mutability and fluidity in digital text. This chapter takes up the second strand of that allegory, in that it relates to the ironic claim to anonymity of the inscription desired by Keats, which would refuse the engraving of his name in favour of the cryptic, anonymising, 'Here lies One Whose Name was writ in Water' (Cacciatore, 1973). As I discussed in the earlier chapter, Keats' friends were disturbed by this spectre of authorial anonymity, by Keats' apparent desire to make a ghost of the figure of the monumentalised author, the individualised, creative Romantic genius.[1] The disquietude experienced by Keats' friends is, as I will show, shared by learners and teachers confronting the issues of authorship and textual authority in the digital realm.

The ways in which texts are produced and shared in internet spaces presents a challenge to our traditional ways of thinking about authorship. Though it would be a mistake to overdetermine their relationship, the 'reconfiguring' of the

[1] We can only wonder whether Keats would have been so keen to play games with the monumentalising of his genius had he been less secure in his belief in his ultimately immortal position 'among the English poets' (John Keats to George and Georgiana Keats, October 25th, 1818, in Gittings, R. (ed.) (1970) *Letters of John Keats: a new selection*, Oxford: OUP.)

author enabled through digitisation and networked computing may be related to the reconceptualisation of the figure of the author by poststructuralism – I touched on this in the previous chapter when I considered the work of Derrida and Barthes in relation to hypertext theory. In this chapter I turn to Foucault and his concept of the 'author function' (Foucault, 1988), in particular this idea as it is reinterpreted by Poster (Poster, 2001a) in terms of 'digital' and 'analogue' authorship.

I extend the discussion of digital authorship and the particularities of digital text into a brief consideration of copyrights and access rights, suggesting with Poster that the digital text, and the emergence of the digital author, embody serious challenges to our conceptions of originality, ownership and theft. They involve the removal of knowledge from the stable material basis – print – which made copyright and plagiarism as we currently understand them realistic propositions. I therefore offer the issue of authorship as another front upon which the digital works to challenge the assumptions around which academia functions. As Poster puts it:

> A printing industry, a market for books, an educational system all developed around the page and the continuity of its arrangement of ink. Modern culture as we have known it in the West is inconceivable without the space/time constraints of pages and books. As we move into digital authorship, we can expect serious alterations in the author figure and in the readerly imagination evinced by mobile bits and liquid pages traveling at the speed of light. (Poster, 2001a: 93)

The final section of the chapter considers how the shift in the way in which authorships are constituted in digital space disturbs the means by which online learners and teachers have traditionally positioned themselves as readers. It looks at examples of how learners and teachers speak about issues of authority, legitimacy and trust within electronic, as opposed to print, text. I use these extracts to demonstrate the ways in which my interviewees appeared to resist digital authorship and altered forms of 'readerly imagination', continuing to look to the figure of the known and knowable author, or the author as

represented by a legitimate institution, as the guarantor of authenticity and reliable academic knowledge. The interviews reveal that, even if the Author is dead, its ghost continues to haunt the networked machine.

'What difference does it make who is speaking?': Foucault's author function

In discussing the role of the surveillance capabilities of the 'e-learning system' in constituting the subjectivity of learners, I drew on Foucault's concept of the individual as constituted through discourse. In his influential essay 'What is an author?' (Foucault, 1988), Foucault explores the notion of the author – generally taken for granted as a knowable entity existing in a stable relation to a discrete body of texts – and exposes it rather as a historically-specific and therefore fluctuating 'function' of discourse. For Foucault, the individualisation of the author is a particularly resonant instance of the working of discourse, representing as it does a 'privileged moment' in the history of ideas (197). Foucault in this essay replaces the figure of the humanistic, individualised author with the concept of the 'author function'.

In what sense does the concept of the author function problematise the still dominant Romantic image of the author as an individual in possession of a creative soul from which the unified text emanates? Foucault's historicising approach reveals, as just one example, the way in which we use the name of the author to perform a 'classificatory function', permitting us to 'group together a certain number of texts, define them, differentiate them from and contrast them to others' (201). The *Iliad* and the *Odyssey*, for example, products of centuries of collective oral storytelling, quite possibly 'authored' by two or more individuals, one of whom may or may not have been the blind poet, who may or may not have actually inscribed the epics with his own hand (Nagy, 1996, de

Jong, 1999), are nonetheless attributed by modernity to 'Homer' as though ambiguity in the issue of authorship were something intolerable.[2]

Certain discourses, certain texts are 'endowed with the author-function' (Foucault, 1988: 202) while others are not. Novels, text books, monographs and poems are all authored. Private letters, public notices (Foucault's examples), graffiti, advertisements, emails and many web sites, though they may have writers, can not be said to have authors. We might write and send fifty individual emails every day, yet we would still not be able to say, 'I am an author'.

In the case of web sites the terminology of authorship is made even more complex by the way we designate 'authorship' to the process of generating the design and code behind the web page, rather than its 'content'. Within the context of the printed and bound artefact, to say 'I am an author' is to claim the privileged status of a generator of a uniquely meaningful text. Within the context of the web, to say 'I am an author' is to take a relatively lowly position as a practitioner of behind-the-scenes geekery. If 'authorship' is the activity 'behind' the web, perhaps other terms are needed to designate the discourses which operate on the surfaces of our screens.

For Foucault, the types of texts which are associated with the author function change over time. Before the Renaissance, 'literary texts' would circulate in a state of authorial anonymity unproblematic since 'their ancientness, whether real or imagined, was regarded as a sufficient guarantee of their status' (203). Scientific texts, however, were 'accepted as 'true' only when marked with the name of their author':

> 'Hippocrates said,' 'Pliny recounts,' were not really formulas of an argument based on authority: they were the markers inserted in

[2] The Homer example is mine, not Foucault's.

> discourses that were supposed to be received as statements of demonstrated truth. (203)

During the seventeenth or eighteenth century this was reversed – the author function became less significant in scientific discourses within which truth might always be redemonstrated, and became crucial as a marker of the validity of the 'literary text' (203).

Through his historicisation of authorship, and his positioning of it within discourse, Foucault confirms Barthes' earlier passing of the death sentence on the Author without the latter's focus on the changed role of the reader. Foucault rather replaces the vision of the author as a free subject consciously 'using' language in the creation of texts over which he or she has complete mastery, with the concept of the author as a discursively constituted entity. Thus the questions we must ask about authorship are not those which revolve around the truth of the individual's humanistic essence, but those which might help us to understand how the author as subject is constituted as a result of discourse:

> How, under what conditions and in what forms can something like a subject appear in the order of discourse? What place can it occupy in each type of discourse, what functions can it assume, and by obeying what rules? (209)

Discourses containing the author function are associated, for Foucault, with systems of ownership. Authorship emerges at the moment discourses become 'goods caught up in a circuit of ownership' and – towards the end of the eighteenth century – 'strict rules' begin to emerge 'concerning author's rights, author-publisher relations, rights of reproduction, and related matters' (202). Most powerfully, however, Foucault conceives of the figure of the author as functioning ideologically, as a means of limiting the free proliferation of textual meaning. While we generally view the author as being a fount of meaning, a 'genial creator of a work in which he deposits, with infinite wealth and generosity, an inexhaustible world of significations' (209), Foucault reconfigures the author figure as one who 'does not precede the works, he is a

certain functional principle by which, in our culture, one limits, excludes, and chooses'. Meaning, filtered through the figure of the author, becomes a limited commodity. The author is not the individualised, inspired creator of open vistas of textual meaning. Instead we have an author function which operates to 'impede the free circulation, the free manipulation, the free composition, decomposition, and recomposition of fiction' (209).

Foucault does not suggest that the flow of textual meaning might ever take place completely unlimited by some kind of 'constraining figure', but he does rather enigmatically offer the possibility of a shift in the kind of system of constraint under which text might circulate. It is at this point that, as Poster points out (Poster, 2001a), Foucault's essay has particular resonance for the texts and authorships of the digital age. I quote Foucault's concluding paragraph in its entirety:

> All discourses, whatever their status, form, value, and whatever the treatment to which they will be subjected, would then develop in the anonymity of a murmur. We would no longer hear the questions that have been rehashed for so long: 'Who really spoke? Is it really he and not someone else? With what authenticity or originality? And what part of his deepest self did he express in his discourse?' Instead, there would be other questions, like these: 'What are the modes of existence of this discourse? Where has it been used, how can it circulate, and who can appropriate it for himself? What are the places in it where there is room for possible subjects? Who can assume these various subject-functions?' And behind all these questions, we would hear hardly anything but the stirring of an indifference: 'What difference does it make who is speaking?' (Foucault, 1988: 210)

Poster's analogue and digital authorship

A passage in Poster's text *What's the matter with the internet?* entitled, 'Beyond the author function', convincingly applies Foucault's insights to emergent forms of digital textuality and to the texts of cyberspace (Poster, 2001a: 65-70). Poster continues Foucault's stated project, which is to 'locate the space left empty by the author's disappearance, follow the distribution of gaps and breaches, and

watch for the openings that this disappearance uncovers' (Foucault, 1988: 200). He takes two of Foucault's broad conceptualisations of authorship – the author function and the post-author function state described in the long quote above – and associates each with particular media, offering 'the term *analogue author* in place of Foucault's *author function* and *digital author* in place of Foucault's *postauthor utopia*' (Poster, 2001a: 69).

Poster avoids accusations of determinism by stressing that in making this connection he is offering an historical rather than a philosophical argument. His contention is that the figure of the modern author is ineluctably linked to print technology, while future authorship – that which takes place through electronic, networked text – produces an entity we might usefully term the 'digital author'. The primary characteristic of digital authorship is that it involves an increased *separation* between the figure of the author and the text. Where the analogue author exists in a strong and stable relation to the (print) text – a relation Poster calls 'narcissistic' in that the text is 'fundamentally an expression of the author' – digital authorship involves a distancing of the figure of the author from the textual artefact:

> Because digital writing may be rewritten with ease, the stability of words on paper is lost, severing the link between author and text that was established with so much difficulty during the first centuries of print. (Poster, 2001a: 97)

In this way Poster uses the term *digital* to 'designate a new historical constellation of authorship, one that is emergent, but seemingly more and more predominant' (97). Digital authorship is dependent neither on the figure of the individualised creative genius nor on the workings of the author function as Foucault describes it. Rather it tends toward the ambiguous, collective or anonymous, toward linkage, connection and fragmentation. I return to this point shortly.

That Poster refers to the post author-function state as a 'utopia' suggests that it is somehow desirable – this is Foucault's implication – yet it would be over-

simplistic to attempt to cast digital authorship as something somehow automatically 'better' than the analogue. Each involves losses and gains, many of which are yet to be conceived of. What is at issue, in my chapter at least, is the clash of the two authorship paradigms[3] within learning and teaching contexts. Where assumptions and expectations forged within the analogue mode are brought up against texts emerging from the digital, disquietude and distrust seem to be the result, as the final section of this chapter will demonstrate.

The strength of Poster's analysis lies in its positioning of the technologies of authorship within a broad cultural context. The stability of the printed page – the 'placid' succession of inked, constant signifiers which might be returned to 'time and time again' (93) – is connected with an author figure which exists as one strand among the many social, economic and philosophical threads constituting the tapestry of modernity:

> The figure of the analogue author fit well with the emerging sense of the body as private, the self as separate from the world of objects, and the investment in rationality as human essence and consciousness as the source of meaning. It fit well with the practice of distanced relations of the free enterprise market, the theory of representative democracy, and secular education in literacy and mathematics. It fit well, in addition, with the narcissistic arrogance of European superiority and imperialist adventure and with patriarchy in its new articulation in the urban nuclear family. (97)

While Poster holds that the conditions governing the emergence of digital authorship are quite different – primarily the diminution of the rational ego through the influences of broadcast media and the growth of global capitalism (98) – I suggest that many of the factors he lists as constituting the (authoring) subject of modernity still dominate the academy and the tacit expectations of learners and teachers. These would include – at least – the assumption of autonomous subjectivity, the possession of an interiorised consciousness, a

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[3] Poster does not use the term 'paradigm', referring instead to authorship 'practices', 'systems' and 'constellations'. However I have found the term useful and appropriate within the context of this thesis.

reasoning mind, and a humanistic essence. To these factors we might add a continuing dependence on the logic of possession as applied to texts and ideas, a logic revealed in the strictures and structures of intellectual property and copyright law. This may go some way towards understanding the resistance to digital texts and authorships which my interview narratives display. Anonymising digital authorship, as this chapter will argue, does not seem to sit all that happily within the university in its current form. My interviewees, as I will show, tended to view the digitally authored texts of cyberspace as somehow subversive, untrustworthy, outside – generally *other* to the true academic project.

Some digital authorships

To return to the core of Poster's argument, in what senses does the digital involve a distancing of the text from the author? Partly, as Poster points out, it is to do with the way the digital 'mobilizes' text (68), makes it fluid and unstable. Chapter four considered this theme in some detail. One effect of this mobilisation is to shift some of the author's function to the reader, making the text open to material transformation and redistribution by a potentially vast collective of readership. Such a move not only works to shift the author from the centre of the text, it also disrupts the logic of ownership within which the analogue text circulates:

> digital writing may function to extract the author from the text, to remove from its obvious meaning his or her intentions, style, concepts, rhetoric, and mind – in short, to disrupt the analogue circuit through which the author makes the text his or her own, through which the mechanisms of property solidify a link between creator and object… Digital writing may produce the indifference to the question 'Who speaks?' that Foucault dreamed of and may bring to the fore in its place preoccupations with links, associations, and dispersions of meaning throughout the Web of discourse. (Poster, 2001a: 68)

Hypertext – 'the paradigm of the digital author' according to Poster (94) – offers, as we have seen, a problematising of the relation between author and

reader. The break-down of the distinction between the two was over-stated by the hypertext theory of the late 1990s, but this need not lead us to deny that, within hypertextual environments, the roles of author and reader are reconfigured. By refusing the linear convention of print, hypertext forces the reader to take a role in the material construction of the text with which she works. Thus each reading experience of the text is different – drawn from a lucky dip bag of potential texts, the text the reader finds herself engaging with is multiple, having a fluidity which loosens the tightness of the author's association with it. The linkability and mutability of hypertext – particularly web hypertext – reduces what Landow calls the 'autonomy of the text' (Landow, 1997: 91) and with that, the autonomy and authority of the author-figure. Landow quotes Heim's concern with the connectability of digital text and its effect on authorship and our conception of originality:

> digital writing turns the private solitude of reflective reading and writing into a public network where the personal symbolic framework needed for original authorship is threatened by linkage with the total textuality of human expressions (Heim, 1987: 215 quoted in Landow, 1997: 94)

Part of the challenge of the digital within the labour processes of the university is that the tight coupling of the individual author with the original, autonomous – and almost always, printed – text is a fundamental marker of academic prestige.[4] As the multiple, anonymous authors of 'This is a test' ask, how are the texts of the digital age – multi-authored, interactive and even computer-generated – to be evaluated? 'If…they have no readily identifiable author(s), who will receive the research points?' (anonymous, 1999). As a multiply linked, anonymously-authored scholarly hypertext, 'This is a test' offers resistance by explicitly elevating each of its readers to the status of co-author, 'as a test of the

[4] Digital writing practices do, of course, take place within the university. Policy papers, strategy papers, working group reports and so on are seldom 'authored' in the sense of being attributable to a single, named originator. Generally they are constructed by anonymised, multiple authors making use of the ease of dissemination and manipulability of digital text. Such texts do not, however, occupy the privileged position or bear within themselves the academic kudos of, for example, the authored research paper.

applicability of the current criteria of academic evaluation and assessment to co-, multi-authored, and inter-active material':

> Readers of this text are hereby authorised to include it on their CVs (as a text co-written by them), and (presuming some, at least, are academics) to include it in their research assessment submissions. (ibid.)

It is a playful stance which can do little more than gesture towards the monumental issue of academic authorship and its embeddedness within the apparatuses of scholarly legitimacy.[5]

Hypertext is of course not the only form in which we must engage with digital authorship, and there are many other instances of the distancing of the author from the text on the internet. The anonymised posting to public message boards and chat rooms is already an established element of internet culture.[6] Within such collectively produced texts authorship is reduced as an issue, subordinated to the rapid murmur of exchange among cyborgised entities of ambiguous gender, geographical location and social status. This textual state is worked out with even more sophistication in MUDs and MOOs.

Email too, though usually clearly linked with an individual sender tends, in its rapid circulation through mailing lists, forwarding, replying, and the cutting and pasting of points and responses, to be broken down into fragmented snippets of collective authorship, where the identity of the 'original' sender, and the authorship of each fragment, often becomes ambiguous or even invisible. One

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[5] One Harvard academic has recently drawn attention to the way in which dependence on the prestige of the printed journal works against the academic interest, commenting that journals 'add virtually zero value, don't pay editors or writers, and make a fortune. All they ever did was smear ink on the paper and put copies in the mail.' He sees a revolt coming in the form of mass resignation from journals by academic staff now tuned in to the open and rapid exchange of ideas enabled by digital technologies. (Pinker, S. (2003) *Mind of a teacher*, Education Guardian, http://education.guardian.co.uk/elearning, Date of access: 10 September 2003)

[6] Incidentally, this does not just apply to teen and geek internet subcultures. That anonymised message boards are mainstream can be seen by a brief delve into the message board for *The Archers*. This reveals regular contributions from Amber Ridge, Lady Macbeth, Rhys Urgent, Ninianne Du Lac, Bookman Oldstyle and Dame Fifi von Hohenzollern.

of the primary strengths of email as a communication medium is the way it enables such rapid, wide and open exchange. This 'slipperiness' of email text distances it from the control both of its 'original' sender, and of the sender's institution. The text automatically appended to the bottom of all emails issuing from Paisley University provides an illustration of an institution attempting rather desperately to control the exchange of email text and delimit the responsibility of its sender:

> The information transmitted is the property of the University of Paisley and is intended only for the person or entity to which it is addressed and may contain confidential and/or privileged material. Statements and opinions expressed in this e-mail may not represent those of the company. Any review, retransmission, dissemination and other use of, or taking of any action in reliance upon, this information by persons or entities other than the intended recipient is prohibited. If you received this in error, please contact the sender immediately and delete the material from any computer. (personal communication) [7]

Not only do such disclaimers attempt to place a limit on the very qualities which make email such a powerful communication medium, but by their very existence they work to obscure the clear relation between text and (single) author which they appear to work to preserve. They seem to set up a relation of ownership of the text of the email by its 'original' sender, yet are appended automatically via the functioning of the university mail server, without the 'original' sender's control or agency, and possibly without their knowledge. Who authored the email I received from Paisley University? The sender of the email? The anonymous writer(s) of the disclaimer? The mail server program which appended the disclaimer to the message? Such an email represents a cyborg fusion of individual(s) and machine in a way which certainly undermines the analogue mode of authorship the disclaimer appears to privilege and protect.

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[7] Paisley are not alone. The email disclaimer has become common – McKenna ((in press), 'Words, bridges and dialogue: issues of audience and addressivity in online communication', in *Education in cyberspace* (ed, Land, R. and Bayne, S.) London: Routledge) quotes a similar one from the University of Stirling in her analysis of the unknowability of email audiences.

There are other examples of the clear waters of authorship being muddied by the ambiguity of the relation between the human and the machinic on the internet. Quittner (Quittner, 1995) tells the story of his search for an impersonator ('quittner') doing the rounds of internet chat, 'joy riding around in my online identity', speaking nonsense, seeking pirated software and constructing a generally unwelcome alternative persona for the real Quittner:

> 'And how are we this evening?' my evil twin wheezed at someone.
> 'Hunky dory?' (I have never used those words in my life. This was a shocking thing to see, even coming out of my clone's mouth.)
> 'All life nominal?' this 'quittner' poseur queried, nonsensically.
> 'N0mbrist,' he said to someone on #callahans, using a zero for an 'o.'
> 'Translate?' he said to someone else.
> 'Quintitiate?' he said to no one in particular. 'Or simply repaginate.'
> At another point, my clone said: '1 n33d warezzz.' (Quittner, 1995)

On investigation, Quittner finds that his evil clone is in fact a 'bot', a software agent created by a hacker and set loose in internet chat to interact with human users on equal terms. As Quittner observes, a bot on internet chat does not necessarily indicate its non-human status – 'you might not be able to tell you're hanging out with software' (ibid.).[8] In this example, the 'author' (the biological entity Quittner) is distanced from text generated in his name, not simply through the appropriation of his identity by another 'author' but through the workings of a wholly disembodied, artificial agency. As Poster points out, 'Digital authors are not simply separated from their words, as they are in the print media, but reconfigured by their relation to the machinic apparatus' (Poster, 2001a: 97).

[8] Turkle reports a similar experience Turkle, S. (1996) *Life on the screen: identity in the age of the internet*, London: Phoenix.

Authorships, rights and copyrights

Osen considers Quittner's case in her paper on copyright law and plagiarism in cyberspace (Osen, 1997). As she reveals, the way in which identity and authorship are reformulated on the internet presents a serious challenge to the legal means by which the link between author and text has traditionally been reinforced:

> When identity is not sacrosanct there can be no liability for defamation, misappropriation, or copyright infringement. As Mark Lemley notes in his article on rights of attribution in cyberspace, 'if authorial claims of identity are readily hackable and thus untrustworthy, all the social and legal rules that depend on identity...are thrown into doubt' (Lemley, 1995)... [Quittner's story] evidences a revelation that online communications cannot be conformed to existing law – not because existing law is 'out of touch', but because the very nature of such communications defies the law. (19)

Poster offers a similar argument. In describing the origins of copyright as developing 'around the figure of the author', he makes the further point that what copyright law actually protects is not simply the author's ideas, but the 'material casing' of those ideas – the book:

> As long as books were the major or even only instance governed by copyright, the legal distinction between the idea and book was nullified in cultural practice by the analogue notion of the author, the spirit contained within the book, governing its meaning. (Poster, 2001a: 86)

Meaning and author thus become interred together within the confines of the printed text, which becomes an artefact over which ownership can be claimed. When the bound book, the apparatus of constraint, falls away – as in the case of the shift to digitisation and distribution of text over the internet – text, meaning and author are likely to go their separate ways, and the whole system of ownership and intellectual property which depended upon their unity becomes problematised. As Osen puts it:

> On the Internet misappropriation and plagiarism are the rule not the exception. Words are lifted, reused, recrafted, passed on. It is in the nature of cyber-argument. Original content along with its author can be lost in a deluge of replies and counter-arguments. It is plagiarism with impunity – completely benign, unintentional, simply a part of Net culture. (Osen, 1997: 13)

The historicisation of the author figure reveals the relatively recent emergence of the Romantic ideal still current – that of the individual creator of a work characterised by originality (Woodmansee, 1994a). As Rose shows, the shift toward the idea of individualised authorship is closely aligned to the emergence of a particular technology – the printing press. This allowed the possibility of authorship as a profession, and the text as a commodity, giving rise to the copyright laws which aimed to enable individuals to extract profit from their intellectual work (Rose, 1993). Thus, as Howard explains, 'the individual author defines the post-Gutenberg playing field, and that author is credited with the attributes of proprietorship, autonomy, originality, and morality' (Howard, 1995: 791). Authority as an attribute might be added to that list.

The modern author therefore, to repeat Foucault's formulation, is less an essence than a function emerging from within various technological and social conditions. Changes in these conditions create change in the way we conceive of the author-figure and the systems of ownership within which it is embedded and, as Poster argues, digital commodities 'have a logic that confounds the principles of capitalism at a very basic level' (Poster, 2001a: 43). In the ability of the internet user cheaply, quickly and flawlessly to copy and distribute software, text, audio and video, Poster sees an appropriation of the role of the producer by the consumer, and a 'blurring of the boundary' (47) between the two. It is not only a question of the mutability of digital text laying it open to cutting, pasting and redistribution in intentional or unintentional acts of appropriation – the act of copying is, in fact, built into the very functioning of the internet, making it questionable whether the logic of appropriation even

applies. The figure of the 'producing consumer' becomes 'the very principle, the automatic operation, of every communication':

> To click on a web page, to send an email, to transmit a message to a chat room is to copy information and distribute it. To be online is to appropriate the right to copy. Cyberspace means producing culture as you consume it. (48)

In this sense, attempting to impose legal limits based in the analogue mode onto the manipulation and dissemination of digital text often seems – as in the Paisley example – anachronistic and self-defeating. Another example is provided in the clearance models adopted by HERON. HERON, originally a JISC-funded project led by the University of Stirling and now a division of Ingenta[9], provides a commercial digitisation and copyright clearance service for UK higher and further education. Teachers or librarians place a request with HERON for core or additional reading material to be made available, and the service then negotiates permissions with the publisher and converts the print-based texts into digital form. These can then be made accessible to students over the internet, via the university web server or virtual learning environment (HERON, 2003).

HERON is particularly interesting from the perspective of this chapter in that – operating within the context of learning and teaching – it is located at the interface of the two paradigms of textuality and authorship I have been describing – print-analogue and digital. Further, as a service its task is to negotiate the needs of both publishers and academics when the interests of each are – to an extent – located in opposing camps. For academics the prospect of freely available, manipulable text which can easily and cheaply be distributed to, and used by, students might be seen to represent an ideal impossible before the widespread emergence of digitisation and networked distribution. For publishers, on the other hand, the priority is the maintenance of sales revenue in

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[9] Ingenta is, according to their web site, 'the leading Web infomediary empowering the exchange of academic and professional content online' (Ingenta (2003) *Ingenta*, web site, http://www.ingenta.com, Date of access: 14 August 2003).

a medium where traditional (print-based) business models are increasingly hard to maintain given that, with digital media, the distinction between supply and demand, and between producer and consumer is increasingly problematic.[10]

The primary clearance model offered by HERON, therefore, is a good example of the anachronistic application of existing copyright laws to digital texts:

> This is know as the 'Textbook' model and must be used when the material being requested is essential reading for the students in question. The clearance is specific to the cohort in question and the document cannot be used either for the next year's cohort on the same course or a cohort on a different course. However, this 'usage' really just refers to directed study. If students on other courses come across the reading via the catalogue, VLE etc as part of their own private research or study, then they are entitled to use it. They just cannot be specifically directed to use it by staff. At the end of the licnesed [sic] period, the document must be destroyed by the institution. (personal communication, 2003)[11]

The ability of the technology to enable open and easy access to digital text is curtailed by a bizarre, and surely unmanageable, distinction between licit and illicit access, while the potentially powerful capability to store and disseminate such text indefinitely is limited by an inbuilt imperative to 'burn the books'.

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[10] The ongoing legal and moral battle between the 'content industries' and the representatives of public interest in cyberspace is well summarised in *The Economist's* survey of the internet society (Economist (2003) *Survey: the internet society*, Economist.com, web site, http://www.economist.com/opinion/displayStory.cfm?Story_id=1534271, Date of access: 14 August 2003).

[11] The official wording of the agreement, drawn from The Copyright Licensing Agency Higher Education Digitisation Licence 2003-2004 is as follows:

> 4.8 The Licensee and as appropriate Authorised Users shall neither require nor recommend (whether formally or informally, in writing or otherwise) that the Licensed Material be read by Enrolled Students on any Teaching Module other than the Teaching Module specified in the Utilisation Licence in question but this shall not preclude:
>
> (a) Authorised Users in independent and non-directed pursuit of their own research reading the Licensed Material, or
>
> (b) references (including hyperlinks) to the Licensed Material being catalogued in on-line library catalogues and similar databases of material available to all Authorised Users, provided that in such cases the catalogue record includes every element of the Compulsory Header.

(Copyright Licencing Agency (2003) *The CLA higher education digitisation licence 2003-2004*, CLA, web site, http://www.cla.co.uk/have_licence/he/he_digitisation_agreement.doc, Date of access: 14 August 2003).

Researchers receiving journal articles in electronic format from the British Library are similarly instructed to immediately print one copy of the article out, and to destroy the electronic version within 24 hours of receipt. Both institutions use file formats which severely limit the manipulability of the digitised text. While HERON makes use of the highly-controllable, printed-page cloning portable document format (pdf), the British Library supplies articles scanned as unwieldy tiff files, an image format which renders any cutting, pasting or linking impossible. By making such choices of file format, the instrumental advantages of cheap, efficient distribution are seized, the mutability of the digital text is minimised, while inconvenience to the user is maximised.

Such examples illustrate the way in which copyright assumes a logic of possession, an ethos of control and limitation – represented for Foucault by the author function and its constraint over the circulation, manipulation and composition of textual meaning (Foucault, 1988: 209) – which sits uneasily within the logic of digital textuality. This, as we saw in chapter four, is rather one governed by the issue of access (Hayles, 1999: 39), by mutability, by rapid, open, often anonymised exchange. As Poster points out, digitisation requires us to ask some fundamental questions about the way we view ownership of cultural artefacts:

> Is it possible to sustain ethical imperatives against violating copyright when reproduction technology is so advanced? Ought one even to attempt such feats? What is the current value of legal and ethical codes of the age of mechanical reproduction? Is it even worth the effort to discover justifications for them in the present context? Ought we not instead to examine the new conditions and seek to elaborate codes and rules that are commensurate with the greatest benefit for all? … Rather than asking how we can apply the law (of copyright) to the Internet, we need to ask, Is copyright the best law to apply to the Internet? We need to turn the question against the old productive system and compel it to justify itself. (Poster, 2001a: 48-49)

I offer the higher education-specific examples in this chapter – the Paisley email, the HERON licensing model and the inter-library loan declaration – not

as a way of suggesting that what is happening, in the university and elsewhere, is the deliberate corporate thwarting of our access to a utopic cyberspace in which thought might freely and purely circulate, an environment autonomous and liberatory by its very existence. While it is true that the interests of the 'content industries' are likely never to precisely match those of learners and teachers, or indeed the general internet-using public, cyberspace is a space as situated as any other, and could never operate outside the social, economic and political contexts and discourses that constitute our world. What these examples illustrate is the confusion which is generated at the interface of the analogue and digital paradigms, the contradictions which operate as we attempt to apply the figures and rules of the former to the operations and spaces of the latter. In part, as I have shown, this confusion comes about as a result of the problematisation of the place of the author figure, the centre around which our systems of copyright and intellectual property revolve. Increasing, it seems, it is a centre which cannot hold.

At this point, a possible fork in the path of this thesis heads toward a consideration of plagiarism and the implications for this realm of practice of the shifts I have been describing. As Howard has pointed out, representations of plagiarism within the academy take little account of the changes to concepts of authorial autonomy and originality taking place both in theory and in the new technological environments with which we are increasingly engaged:

> The regulatory fiction of the autonomous author continues to prevail in academic prohibitions of plagiarism. Institutions' uniformly juridical policies against plagiarism restrict the extent to which pedagogy can respond to revised cultural representations of authorship. (Howard, 1995: 797)

There is a large literature concerning the internet and plagiarism in particular. While some of this highlights the importance of maintaining flexibility in representations of plagiarism in the face of the added complexity introduced by digital text (Howard, 1995, Hannabus, 2001, DeVoss and Rosati, 2002, Hunt, 2002, Rosamond, 2002), much is concerned with decrying the propensity of the

web to 'breed' plagiarism (Austin and Brown, 1999, Creech and Johnson, 1999, Phillips and Horton, 2000, Grover, 2003), to the extent that one author refers to the internet as 'the newest nemesis in the academic marketplace' (Phillips and Horton, 2000: 150). Such positions tend to preach the moral necessity for teachers to confront this propensity with no analysis of the historical and ideological contexts within which such morality is constituted.

How universities locate student plagiarism within the shifting theoretical and technological contexts of ownership, authorship, originality and textuality is an ongoing and vital debate. Rather than fail to do it justice here due to constraints of time and space, I prefer to highlight it as an issue for future research and return at this point to the issue of the disquietude generated at the interface of the analogue and digital paradigms of authorship, as it is related in the accounts offered by students and teachers. The copyright strictures I have described in this section as being applied to digital text – the email disclaimer, the HERON licensing model and the interlibrary loan declaration – have been characterised by distrust, anachronism and contradiction as they attempt to cement a loosening relationship between text and author-publisher. These are terms similar to those I wish to turn to now, as I consider the accounts students and teachers give of the place of authorship and authority in the texts of cyberspace.

'People are just publishing their ideas up': accounts of textual authority

> Who really spoke? Is it really he and not someone else? With what authenticity or originality? And what part of his deepest self did he express in his discourse? (Foucault, 1988: 210)

> I just think it's not really as brilliant as it's made out to be, it can lead you down so many blind alleys and there's so much out there that you don't know whether it's actually true or who wrote it or am I ever going to find it again?
> **Des**

Trust

Earlier in this chapter I described Poster's alignment of Foucault's post-author function state with the various forms of digital authorship. My contention has been that the post-author function state, as it emerges in the digital text, presents a fundamental challenge to academic conventions and discourses, which depend on what Poster calls the analogue mode of authorship. One front upon which this challenge is resisted is that of plagiarism and ownership. This final section will demonstrate another, related, front of resistance in the kinds of discourses students and teachers employ in discussing the authority and authenticity of digitally authored textual artefacts.[12] The issue of 'who is speaking?', far from being a subject of indifference (Foucault, 1988), was the key issue for interviewees. The tendency in digital texts for the speaker, or author, to be displaced from his or her central position – to be ambiguous, marginal, collective or anonymous – translated for interviewees into a general distrust of the veracity of text on the internet.

> I never know what's authentic off the net you know what I mean because although it could be to do with the subject, how real is that? who put it on? there's sometimes if there's no author or nothing, I could be using it and the information could be false. so I tend to be wary.
>
> you trust a book more?

---

[12] I should point out here that, although digital text has many forms and inhabits various spaces on and off the internet, interviews tended to focus very much on the authorship of web texts and networked resources.

yeah.

why?

just because the author's there, it's been written by a specific author, it tells you in the book, it tells you in the front. um it's been published so therefore it's real. um for instance I mean, it was a site it was for Japanese and the rubbish that was on about all the different concepts and they weren't true they were completely the opposite from what the books were. and we had been warned against it but I could see why when I went into it, so I'm quite doubtful of using it for information unless it's got an author or is a government body or a uni or you know an educational building kind of thing. I tend not to use it I must admit.
Heather

For Heather, the author appears to operate as the figure through which a relation of trust is established between reader and text. Thus the distancing of text from author on the internet seems to present a challenge to the traditional means by which, for her, textual authenticity is established. As Poster points out, 'The cultural practice of taking authors of books as trustworthy authorities, as persons of possibly great creativity, is difficult to reproduce in the case of digital texts on the Internet' (Poster, 2001a: 97). In Heather's case, internet text betrays the trust invested in the text through its undermining of this Romantic model of authorship.

Authenticity for Heather ('how real is that?') is tightly associated with authorship ('who put it on?'). The specificity of the named author, and the position of his or her name 'in the front' guarantees the reliability of the text, while the status of the printed artefact as something 'published' functions not only to establish the text as true, but also as something real – 'it's been published so therefore it's real'. As in the accounts given in chapter four, the printed text with the named author is allotted the terms of reliability, truth and authenticity, while the digitally authored text inhabits the realm of the unreal, the untrustworthy – it is something of which the reader is 'wary'. The book is presented as the means of establishing truth, while the digital text represents that which is not true, that which is 'completely the opposite from what the books were'.

if you had to choose a medium you felt happiest using as a teacher or a learner, what would it be?

books.

can you say why?

um, [sigh] because, are you going to put the sigh in brackets?

[laughs] yes, square brackets probably.

[laughs] because, it's so difficult to answer, because um, cos you know where you are. you know I suppose because it's got levels of authority doesn't it, a book, it's got sort of the publisher and the printer and the reviewer and and the author, so you have sort of levels of authority like you can tell if the book's worth reading by the publisher even, that kind of thing. em, and, just because of the breadth of what you can get in books on certain subjects. you just can't get anywhere else without doing empirical research. and I suppose I would trust my own empirical research much more than I would trust a book but em I don't have time [laughs] to research everything! yeah so yeah, a book.
Diane

Diane echoes here the account given by Sue in chapter four, that the book offers the reader a secure subject position – 'you know where you are' – from within which to establish its value. The author here is an element in a matrix which includes other legitimate authorities – publisher, printer and reviewer – by which the reader can locate her own experience of the text. The book maintains and embodies a hierarchy, 'levels of authority', within which the reader can position herself. This excerpt from the interview took place within a broader discussion of digital textuality, but the digital text remains an invisible other in this extract. Diane does not draw a direct comparison but implicit in what she says is the idea that the security of hierarchy she refers to tends to fall away when a text moves into cyberspace.

Trash

That there are legitimating institutions which operate around the printed text, but which are often absent from the digital text – the author is one – is a common theme. At the end of Heather's extract, she hints that the function of the author as guarantor of the veracity of the text might instead be carried out by its relation to some other material or institutional base, 'a government body or a uni or you know an educational building'. This was a common perspective.

and d'you trust what you find on there? d'you think it's reliable information?

uh yeah, I'm very trusting so I generally trust it its, I know I probably shouldn't but I've tended to sort of become more aware at em university that you have to look at web sites where it's coming from, what site it's coming from the article or document or whatever, where it's come from and know sort of know whether if it's come from a trashy little site it could be just one person's opinion whereas if it came from say like *Guardian Unlimited* then it's much more prestigious and respected. so.
Marina

Marina seems to suggest that her tendency to be 'very trusting' is something of a disadvantage when working with internet texts ('I know I probably shouldn't'). This sense almost of guilt at investing trust in the digital text is echoed in other accounts (in particular, see Alison's and Nancy's below). Where for Heather internet text was 'rubbish', for Marina it is 'trashy'. 'Rubbish' and 'trash' were terms which recurred throughout many of the accounts given by interviewees, as though the digital renders text not only dubious but disposable.

Much as, for Heather, the legitimating author function might be performed by 'a government body or a uni or you know an educational building', for Marina it is displaced onto an institution – the *Guardian* – which functions as a kind of trademark confirming quality and respectability. It is common in these interviewee's accounts to see the legitimacy of digital texts being guaranteed only by institutions which have credentials already firmly established through the publishing of *print* artefacts. For Delia, a teacher, it is only the legitimation – or limitation – of print journal publishing convention which gives respectability to online texts:

I don't trust the accuracy and the um respectability if you like of material published online. I know that there is some refereed stuff particularly journals that are made available online and that kind of thing which are useful, but when people are just publishing their ideas up, or publishing undergraduate or postgrad essays then I think that has to be treated with caution.
Delia

Delia's comment reflects that of Marina – and others, as I will show – in its distrust of the digital mode in which people 'are just publishing their ideas up'. These accounts suggest that the cheap, easy, instant and global dissemination of

texts and ideas is greeted in academia with suspicious murmurings rather than shouts of glee. Again, I suggest that this is understandable only by considering the tightness of the coupling of the stable, printed text and the individualised author, and the position of this grouping at the heart of academic practice. On the internet the schism between 'ideas' and 'knowledge' gapes wider – people 'just publishing their ideas up' are definitely not authors.

Temptation

There is nothing wrong, of course, with students and researchers treating texts with caution. Online or offline, learning to distinguish between those which have value within academic discourse and those which do not is an essential skill. Yet it is curious to see wariness, suspicion and caution applied across the board to digital texts, with no such questioning, in these accounts, being levelled at printed texts or at the institutions and conventions which legitimate them. Alison's account is perhaps one of the most poignant examples of this, in that it operates at the locus of one of the most problematic and loaded instances of the operation of textual authority and authorship – the biblical Word:

at home I'm in the girls brigade and em I we needed, I left after 5th year you see and I only needed two more points to get my brigader brooch, so I was sort of working on it down here, and Eileen sent me this thing that I had to do which was seven different sayings, just go and find information about them. and I was quite upset because I went to [the campus library] and [the library] did not have a bible! [laughs] so I went online to do it and I typed in like Saint Catherine and Saint Peter, and this stuff came up, and I was writing it but, and I just copied it down what was there, but I wrote to Eileen and I wrote a note saying 'look, I've got all this off the internet, I don't know if this is right or not' because I didn't, I trusted it, but I wasn't too sure, so I just sent a 'look if this is complete rubbish I'm really sorry!'. so there was that just not quite knowing if you were taking something that was that was right or not. I mean you you trust it but there's that wee niggle. that maybe it's just, you wou I wouldn't trust it to put in an essay anyway. put it that way.

right, and was it ok, did you find out?

o, em yeah. I don't know, my dad just has, I said to my dad, 'o have you spoken to Eileen' cos I never saw her when I went home, and he goes 'yeah, she said to tell you it was ok'.
Alison

For Alison, the internet is a compromised second-best alternative to the printed text, the bible, in which authority resides.[13] Instead of the required 'information' which she is asked to present, she offers 'this stuff' off the internet, with a strong disclaimer that it is likely to be 'complete rubbish'. Certainly it resides outside acceptable academic discourse, since she would not 'trust it to put in an essay'. Her account vacillates between the desire to trust, or at least to use, the digital 'stuff' and her sense that she should not ('I trusted it, but I wasn't too sure'/'there was that just not quite knowing'/'I mean you trust it but there's that wee niggle'). Like Marina there is almost a sense of guilt at investing trust in the digital text. This temptation to consume that which should not really be consumed is perhaps best expressed in Nancy's account.

you have to be smart about going on the internet what's education and what's just trash, cos not everything on the internet is educational. so you have to be careful.

have you had any experiences of that?

o sure you know, you go in there and you type in the keyword and uh things will come up that are educational, things will come up that are government based, which is still educational obviously, but then you've got your, your just BS [bullshit] web pages say that I could've gone on there and say 'I'm going to make up an internet page and put all my papers in there' and though it may be educational what I'm saying may not always be true. so you have to be really careful what you use, so yeah I've come across pages like that y'know it's like I type in 'dolphins' and all I see is just a monkey jumping and I'm just like 'uh', the only reason why that's there's because the name of the monkey's dolphin, I dunno! so I mean I'm just trying to think of something. um but yeah, you know there's loads of web pages where they may look educational but once you go into them you see them and they're not, you just have to back away, and maybe they're tempting to use them cos they may say certain things that you want to say, but you just like stay away from them. it's like, candy when you're on diet! [laughs]
Nancy

Unlegitimated (non 'educational') texts here are 'trash' and 'BS' – waste products – but also, like 'candy', a tempting offering of which the reader-user must be suspicious, wary. Either way, they are something to 'back away' or 'stay away' from. Nancy's account also brings us back directly to the role of the

[13] I do not know what biblical resource Alison used on the web. There are many online bibles though, as Lurie points out, this very fact, added to the links to explanatory text, additional information, alternative translations and multiple other sites usually included in such resources, tends to work to 'explode the authority of the text' rather than preserve it. (Lurie, P. (2003) 'Why the web will win the culture wars for the left: deconstructing hyperlinks', *CTheory*, **26, 1-2**. http://www.ctheory.net).

author as individual originator of the text, in that she speculates on the possibility of her own role as author ('I could've gone on there and say "I'm going to make up an internet page"'). It is interesting that she does not speak of 'writing' or even of 'creating' or 'designing' a web page, but of making one up, as thought the very act of web authoring involves a kind of artifice or deceit, 'what I'm saying may not always be true'.

There were other instances of students considering the ultimate proof of the dubiousness of digital text on the web being that they could have constructed it themselves.

and the information's not reliable you know I mean you can find out share information on the *Daily Telegraph* type in, go to a web site, you just trust this web site it could be any idiot, it could be like, *I* could've done it! you know it's that whole I could've sat there and just made it all up, like, and whereas like you wouldn't get that in the library, it's all checked and verified, and I'm sure you know there probably are web sites that are like that that but you, what are they? where are they? how do I find them? where y'know what do I look for? y'know you just there's no way of finding out. I think the library's more, it's more traditional obviously.
Charlie

For Charlie it is the library which functions as legitimating institution, in an echo of Heather's dependable 'government body or a uni or you know an educational building'. The library, for him, is an established academic space working to 'check and verify' all the texts it embraces, much like Diane's matrix of author, publisher and reviewer. Cyberspace, by contrast, is a non-legitimate academic space in which texts are 'not reliable', or within which the knowledge of how to access 'verified' texts is obscured ('there's no way of finding out'). The legitimating institutions within which the printed text is embedded do not occupy digital space in the same way, severely compromising the criteria by which the student is used to establishing his or her own relation to the text as reader. The image is of text and reader cast away together on the smooth seas of cyberspace (Deleuze and Guattari, 1988) with no sight of land by which to take a bearing.

Conclusions

To conclude this chapter I would like to return to its beginning and consider again the questions Foucault suggests we would ask of a text once we have moved beyond the author function, the questions which Poster suggests are germane to digital authorship:

> What are the modes of existence of this discourse? Where has it been used, how can it circulate, and who can appropriate it for himself? What are the places in it where there is room for possible subjects? Who can assume these various subject-functions? (Foucault, 1988: 210).

These questions are contrasted with those we might ask while still dependent on the author function, the state aligned here with modes of analogue or print authorship:

> Who really spoke? Is it really he and not someone else? With what authenticity or originality? And what part of his deepest self did he express in his discourse? (210)

In the section of this chapter which considered some examples of the application of the principles of copyright to digital text, I illustrated how three institutions attempt to limit the de-coupling of author and text within cyberspace. These examples emerge from within the paradigm expressed by the second group of questions, in their concern to preserve the principles of the originating, individualised author and the authentic, expressive text. Yet, while they emerge from what, following Poster, I have called the 'analogue' paradigm, the copyright strictures I describe inevitably contain within themselves the constant murmur of the alternative set of questions. The very existence of such strictures is due to doubts introduced by the new modes of circulation and appropriation, the alternative 'modes of existence' of the discourses of the digital. Foucault's post-author function questions are being asked, but are perhaps not receiving the answers he might have looked for.

I see a similar pattern emerging in the accounts given by interviewees. Students and teachers spoke to me from within an 'analogue' paradigm, within which their main concern was with the inauthenticity of the digital text, the anonymity or ambiguity of its author and the disappearance of its legitimating institutions. These concerns made the digital text unfit not necessarily for consumption *per se*, but for consumption within academic space. 'Candy' is banned from the academic diet sheet.

While the accounts emerged from this analogue paradigm, the 'digital' questions again operated as a murmur within the narratives of students and teachers much as they did in the copyright examples. Interviewees were very much concerned with the patterns of circulation and the forms of digital text, its places of use and the issues involved in establishing a subject position in relation to it. Yet the posing of these questions tended in the end to function not to establish a utopic, author-free textual paradigm within cyberspace, but to reinforce the non-legitimacy of the digital text within academic discourse. The questions necessitated by the new modes of circulation of such text render it 'trash' while, most strikingly perhaps, the extent to which students can appropriate the digital discourse for themselves is the very extent to which it is delegitimated ('it could be any idiot, it could be like, *I* could've done it!').

Within the context of learning and teaching, therefore, we seem to be out of earshot of the question which, for Foucault, might stir in the background: 'What difference does it make who is speaking?' (Foucault, 1988). Rather, as I have demonstrated in discussing the interview fragments, the digital texts which indicate authorial absence are treated with suspicion, wariness, caution and distrust. They are termed rubbish, trash and bullshit. By contrast, those printed texts in which the presence of the author or other legitimating institution is evident are accorded the terms of accuracy, respectability, authority, authenticity, truth and prestige. The author functions much like the figure of the goddess Athene which I have used as an allegory in previous chapters – it is the centring presence which renders the text stable and knowable, and through

which the text-author coupling may be located within a secure, hierarchical system of legitimation.

Thus I offer the opposing digital and analogue paradigms of authorship as another arena within which long-established academic norms are being problematised by the incursions of the digital. There may be areas of the web where the 'digital' questions receive different, perhaps less entrenched answers, but the web spaces of the academy do not yet number among them. The discourses of instrumentality and what Poster calls the 'gatekeepers of authorship – the watchdogs of copyright, printing establishments, tenure committees and so many others' (Poster, 2001a: 98) have so far functioned to maintain the academy within the analogue paradigm, and I believe it would be a mistake to predict a full-scale shift coming up any time soon. Rather we are likely to see the practices of the digital continuing to nibble away at the certainties of academic authorship, introducing more – and more pressing – anomalies, inconsistencies and contradictions to the conventional modes of understanding of academic authorship, ownership and authenticity.

I end this chapter with an extract – the only one I encountered – which seems largely to oppose those views expressed in the other interviews. It hints at a perspective from which the occupation of the position of speaker or author of the digital text does not involve engagement with a non-legitimate textual form. For Marianne, the digital rather becomes an arena in which discourse appropriation involves a positive engagement in the collective murmur of cyberspace.

what metaphor would you use to talk about the structures of the web? when you're in it, what kind of space, what kind of images do you have of it?

I think it's like a kind of galaxy, like a starry sky, it's got points of light which you travel between a bit like an astronaut with a backpack, with a jetpack, you travel between these points of light, and there's a lot of darkness, all sorts of kind of types of darkness, moral as well as qualitative! [laughs] which you, yeah, you have to move through to get to the bright points. [laughs]

[gap of 12 lines]

and what about what you do, the metaphor of surfing, do you feel like a surfer?

no because it's much deeper than that mmm [pause]

you just described yourself as an astronaut?

yeah, I'm travelling through space, I'm not I'm not surfing a wave, but at the same time I'm travelling through a space that hasn't got any depth, it's got no depth. it's surface, it's all surface. it's neither depth nor surface, it's something else.

and you like that?

yeah I love it.

why?

I like its possibilities, and I like the fact that I can be part of it and I can put things in it [laughs]. I can make stars, can make new stars. anyone can.
Marianne

Chapter 7
Material echoes: the embodiment of the online learner

Introduction

15. Shevchenko, Narcissus and Nymph Echo, 1856

The previous chapter focused on the author figure, discussing how its stable relation to the printed text forms a centre around which markers of legitimacy and meaning are established within the academy. The relation between author and printed text was described as 'narcissistic' (Poster, 2001a) in the sense that the book is seen fundamentally as an expression of the autonomous author, 'the mirror of the ego's own illusory sense of totality' (Keep, 1999: 166). Obsessed with his or her reflection in the printed page, the analogue author does not see the changes that are being wrought within the contexts of the digital. To extend the mythical metaphor to its conclusion, the analogue author remains oblivious to the possibility of his or her approaching death in the texts of cyberspace.

If the previous chapter concerned itself with the figure of Narcissus, I wish to use the figure in the background of his tale – the fading form of the nymph Echo – as my image for this final chapter, one which looks at the issue of the embodiment of the online learner. In mythology, Echo pines away with love for Narcissus until her body dies and all that remains is her voice, capable only of repetition of the phrases of those whose bodies remain. This chapter aims toward a metaphorical return of Echo's body to her voice, though it is a vision

of the body fundamentally affected by its relation to the technological and machinic.

In considering the centrality of embodiment to human ways of learning and being, this final chapter turns its gaze away from the discursive toward the material, reflecting a similar turn within contemporary theory. Often drawing on Bourdieu's notion of the *habitus* (Bourdieu, 1977), the phenomenology of Merleau-Ponty (Merleau-Ponty, 1962), Haraway's theorisation of the cyborg (Haraway, 1991b) and Latour's concept of hybridity (Latour, 1993), the turn to the body emerges in the work of cyberculture theorists (Stone, 1991, Stone, 1995, Coyne, 1999, Hayles, 1999), philosophers and social theorists (Shilling, 1993, Damasio, 1994, Grosz, 1994, Burkitt, 1999), and theorists of education (Shapiro, 1994, McWilliam and Taylor, 1996, Monroe, 1999, Dreyfus, 2001, Hocking et al., 2001)[1].

To locate my own thoughts within this tradition, I will begin the chapter with a very brief summary of the mind-body split as it emerges in classical and Enlightenment philosophy, and will indicate how this dualism is carried through to contemporary accounts both of the subject in cyberspace and of the distant learner. I will then present the theoretical context of this chapter in two sections which reflect the two main perspectives on embodiment which emerged in my discussions with students and teachers. The first outlines moves in cultural and cybercultural theory which attempt to disrupt and deconstruct the oppositional hierarchy between mind and body. The second, related, area focuses on approaches which consider the shifting significance of embodiment as we enter the age of the posthuman.

I then consider and critique two contrasting approaches to embodiment within online learning environments – McWilliam's analysis of the relation of *eros* to pedagogy (McWilliam and Jones, 1996, McWilliam and Taylor, 1996,

[1] As I hope the references reflect, feminist thought has been fundamental in each of these disciplinary areas.

McWilliam and Taylor, 1997) and Dreyfus' account of the inadequacy of learning which takes place without the bodily presence of the teacher (Dreyfus, 2001).

The chapter ends with a consideration of interviewees' accounts of embodiment in the online classroom, structured around the two theoretical strands I have identified – first, the losses involved in a mode of learning in which the body is invisible and second, the gains to be found in maintaining an openness to the differently articulated body in cyberspace.

The mind-body split in philosophy, cyberculture and online learning

Grosz has drawn our attention to the way in which philosophy as a discipline depends upon the privileging of the conceptual over the corporeal:

> Philosophy has always considered itself a discipline concerned primarily or exclusively with ideas, concepts, reason, judgement – that is, with terms clearly framed by the concept of mind, terms which marginalize or exclude considerations of the body. (Grosz, 1994: 4)

Indeed, the notion that the body is distinct and separate from the mind or soul is a dualism which has dominated western philosophy since Plato. In the *Phaedo* Plato asserts this duality in terms of the soul being 'the very likeness of the divine, and immortal, and intelligible, and uniform, and indissoluble, and unchangeable', while the body is 'in the very likeness of the human, and mortal, and unintelligible, and multiform, and dissoluble, and changeable' (Plato, 360 BCEa). This dualism, extended into the concept of the distinction between Forms (unchangeable, eternal, incorporeal (Plato, 360 BCEa)) and appearances (the material – the mere shadow of the Real (Plato, 360 BCEb) – which is apprehended through our embodied perception), carries through into modernity largely through Descartes' (1596-1650) separation of body and mind into two separate and independent substances. As humans, according to Descartes, we

experience ourselves first as a mind thinking, and then as a body which occupies time and space but does not think:

> And although perhaps (or rather as I shall shortly say, certainly) I have a body to which I am very closely united, nevertheless, because, on the one hand, I have a clear and distinct idea of myself in so far as I am only a thinking and unextended thing, and because, on the other hand I have a distinct idea of the body in so far as it is only an extended thing but which does not think, it is certain that I, that is to say my mind, by which I am what I am, is entirely and truly distinct from my body, and may exist without it. (Descartes, 1968)

The mind-body split continues to hold sway over our conception of ourselves to the extent that we often do not even think of it as a socially constructed opposition. To begin to bring the discussion around to the central concern of this chapter, I suggest that this can be seen in some of the discourses brought to bear in describing our relation to digital technologies. As Coyne has pointed out, the Neoplatonic ideal extends itself into cyberspace through the 'technoromanticism' of some of its proponents:

> Certain digital narrative is idealist and has taken to heart the Neoplatonic concept of *ecstasis* – release of the soul from the body – though here the soul is replaced with the mind, the means of ecstasis is immersion in an electronic data stream, and the realm of the unity is cyberspace. (Coyne, 1999: 10)

This vision of cyberspace as a zone in which minds can merge, untrammelled by the conventional constraints experienced by our embodied selves in our 'real lives', was common in theoretical and popular conceptions of cyberspace in the 1980s and 90s. Where William Gibson conceived of the vulnerable body (the 'meat') of the cyberspace jockey left behind by a thinking self jacked-in directly to the streaming data-flows of the matrix (Gibson, 1986) – a vision the Wachowski brothers carry through into the trilogy of *Matrix* films (Wachowski and Wachowski, 1999-2003) – John Perry Barlow heralded cyberspace as a threshold into a new era of the mind, where we would be free from the governmental forces which exercise control over our embodied selves:

> Cyberspace consists of transactions, relationships, and thought itself, arrayed like a standing wave in the web of our communications. Ours is a world that is both everywhere and nowhere, but it is not where bodies live.
> ...
> We will create a civilization of the Mind in Cyberspace. May it be more humane and fair than the world your governments have made before. (Barlow, 1996a) [2]

The roboticist Hans Moravec famously extended Cartesian dualism into a dramatic future for human intelligence, when he proposed the possibility of downloading an entire human consciousness into an artificial material base. Moravec suggests that those who view the human body as being integral to human consciousness (those who take what he calls a 'body-identity position') ought rather to consider the essence of the human as residing in *process*:

> Pattern-identity, conversely, defines the essence of a person, say myself, as the *pattern* and the *process* going on in my head and body, not the machinery supporting that process. If the process is preserved, I am preserved. The rest is mere jelly. [original italics] (Moravec, 1988: 117)

Such positions may appear extreme, yet much discourse around distance learning and the use of learning technology in higher education carries their echo. That we even conceive of the distant learner as being a possibility is revealing of our dependence on a vision of education in which, as long as the 'mind' of the learner is engaged, the locus of her body is largely irrelevant. For Peters, the 'mind/body separation' is 'the most culturally deeply embedded dualism with which educational theory and practice must come to terms'; 'it nests within a family of related dualisms and remains one of the most trenchant and resistant problems of education in postmodernity' (Peters, 2002: 404).

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[2] In an article in *Wired* only a few months later Barlow, while not exactly recanting the frankly embarrassing declaration, re-asserts the centrality of embodiment to the experience of being human, claiming that 'There will always be bodies starving, bodies in prison, bodies dancing, bodies making love' (Barlow, J. P. (1996b) 'Declaring independence', *Wired*, **4.06**, http://www.wired.com/wired/archive/4.06/independence.html).

If we see distance learning as the logical extension of the Cartesian mind-body split in education, we can glimpse in the discourses of many proponents of e-learning something like the desire for ecstasis, in their vision of the pure mind of the learner liberated from the bodily constraints of time and space to achieve a one-ness with other minds in the digital expanses of the cyberspace classroom. The tedious 'any time, any place' mantra is merely one manifestation of this vision:

> Every learner can, at his or her own choice of time and place, access a world of multimedia material… immediately the learner is unlocked from the shackles of fixed and rigid schedules, from physical limitations…and is released into an information world which reacts to his or her own pace of learning. (Benjamin, 1994: 49)

Moravec's future may seem like a wild imagining, yet his privileging of process over matter is a dualism that resonates throughout much mainstream discussion of the place of technology within higher education:

> space and time have become negligible parameters for data transmission. Even now they cross over borders. …. Those who have always interpreted all learning and teaching as an exchange of information, will understand the cha nges that have taken place and will tend to accept them. (Peters, 2000: 16)

Such perspectives – consciously or otherwise – function to support the kind of instrumentalist imperative which sees technologies for learning as offering a straightforward package of wider 'markets' and enhanced efficiency. Not only is the university spared the cost and inconvenience of dealing with awkward and messy masses of student bodies, it can do so in good conscience by invoking the aim of the active liberation of Mind (often expressed in such terms as 'learner empowerment' and 'flexibility', for example (DfES, 2003)).

The focus in policy initiatives which aim to make access to electronic resources widely available also tends, as Jones reveals (Jones, in press), to endorse a perspective in which accessibility (conceived primarily 'in terms of "cross-

searching", "fusion services" and "interoperability"' (ibid.)) is privileged as an issue over the situated learning experiences of students.[3] It is another expression of dualism, manifested in this instance in initiatives which see the role of technology in education as being to liberate the intellect with little regard for embodied context.

A later section of this chapter will show how, when students talk about their experience of being online, they often do so in a way which does not draw so clear a distinction between their learning bodies and their learning minds. Many feel the strain of the apparent erasure of the body involved in the use of learning technologies – particularly those the focus of which is communication. To this extent, my interviewees were in tune with current theory which reacts against the privileging of mind over matter, and the dualism which underlies it. It is to such theory that I now turn.

'Re-discovering' the body

> There is no such 'thing' as the 'mind'. (Burkitt, 1999: 12)

> What separates the cyberspace communities from their ancestors is that many of the cyberspace communities interact in real time. Agents meet face to face, though as I noted before, under a redefinition of both 'meet' and 'face'. (Stone, 1991: 116)

The quotes from Burkitt and Stone demonstrate that the language in which we have conventionally spoken of mind, body and their relation is becoming exhausted. If Burkitt's draws our attention to the impossibility of continuing to distinguish mind as a substance separate and contained from the body, Stone's reminds us that the terms by which we understand embodiment itself are radically shifting. I return to Stone later, and focus for the moment on theory

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[3] Jones' example is the UK JISC-DNER policy initiative (the Distributed National Electronic Resource), a project which aimed to provide access to a range of 'quality assured' internet resources for education. It was abandoned in 2002 to be replaced by the JISC's Information Environment initiative, which has a slightly increased emphasis on local contexts (see http://www.jisc.ac.uk/index.cfm?name=ie_home).

which challenges the oppositional hierarchy set up by Descartes and perpetuated in the discourses discussed above. Hayles, who talks about the mind-body split in terms of the distinction between information and its material base, describes what is at stake:

> The point is not only that abstracting information from a material base is an imaginary act but also, and more fundamentally, that conceiving of information as a thing separate from the medium instantiating it is a prior imaginary act that constructs a holistic phenomenon as an information/matter duality. (Hayles, 1999: 13)

A similar argument, though expressed in different terms, is offered by Burkitt, who proposes an anti-Cartesian re-unification of mind and body under the term, adopted from Ilyenkov (Ilyenkov, 1977), 'the thinking body' (Burkitt, 1999: 67). Within such a view, thought is reconceived as 'embodied, social activity' (7), and the mind-body opposition undergoes a reversal:

> Indeed, far from the mind being something distinct from the body located in space and time, as Descartes thought, the mind can be reconceptualised as an emergent effect of a body active within the social, historical and biological dimensions of space and time. (15)

Thought processes and embodied practices are enmeshed through the mediation of artefacts – objects and symbols (including language) – through which we extend ourselves in the world and which, in turn, re-form our bodily movements and perceptions. This view, as expressed by Burkitt, reacts against poststructuralism and social constructionism and their tendency, as he sees it, to re-assert Cartesianism by privileging the discursive over the material. In drawing on the work of Ilyenkov and Merleau-Ponty (Merleau-Ponty, 1962), Burkitt asserts the primacy of the body; language in this view does not precede thought, rather it works to extend or enhance it:

> According to Merleau-Ponty and Ilyenkov, thought originally belongs to the spatio-temporal dimension and is extended through the symbolic realm. Thus, thinking involves a body engaged in spatial and temporal activity, one that is related to other people, animals and objects, and which carries out a series of socially

> defined activities; a body always thinking in the sense that it is aware – to some degree – of its location, movements and the things it is seeing or hearing. For humans, we are not only partly aware of these things, but we become conscious of many of them and this consciousness is the ability to reflect on one's sensations and thoughts…The ability to reflect consciously on thought or sensation, which are initially spatially located, comes through the symbolic dimension. (Burkitt, 1999: 80)

That thought is embedded in embodied practices and not always conscious or reducible to abstraction is also present in the work of Bourdieu and his concept of the habitus (Bourdieu, 1977, Bourdieu, 1984, Bourdieu, 1990, Bourdieu, 2001). The habitus is the learned series of bodily dispositions through which we are placed within – and through which we perpetuate – the social order. The patterns of our daily lives are not experienced or learned through conscious abstraction, but through repeated movements and actions which become habitual. Thus the habitus defines our living practices, deportment, modes of speech, manners and tastes, in the process marking us as belonging to a particular social group or class. Through it, we know more than we think we know – it is a form of (embodied) knowledge which we *live*, rather than think or speak:

> Bodily hexis is a political mythology realised, em-bodied, turned into a permanent disposition, a durable way of standing, speaking, walking, and thereby of feeling and thinking. (Bourdieu, 1990: 69-70)

Hayles provides a useful summary of the implications of Bourdieu's ideas when she describes them as working to 'turn Descartes upside down':

> The central premise is not that the cogitating mind can be certain only of its ability to be present to itself but rather that the body exists in space and time and that, through its interaction with the environment, it defines the parameters within which the cogitating mind can arrive at 'certainties', which not coincidentally almost never include the fundamental homologies generating the boundaries of thought. What counts as knowledge is also radically revised, for conscious thought becomes an epiphenomenon

> corresponding to the phenomenal base the body provides. (Hayles, 1999: 203)

For Hayles, embodied knowledge – 'contextual, resistant to change, and obscure to the cogitating mind' – has the power to 'define the boundaries within which conscious thought takes place' (205). To these characteristics she adds another, central to the concerns of this chapter:

> Formed by technology at the same time that it creates technology, embodiment mediates between technology and discourse by creating new experiential frameworks that serve as boundary markers for the creation of corresponding discursive systems. In the feedback loop between technological innovations and discursive practices, incorporation is a crucial link. (205)

Thus, as Latour also has revealed (Latour, 1993), body, language and society are caught up in an interdependency which poses a fundamental challenge to our conventional distinction between mind and body, between the discursive and the material, and between the cultural and the natural.

Re-articulating the body

> Why should our bodies end at the skin? (Haraway, 1991a: 178)

The collapse of the boundary between the natural and the technological is one of the themes taken up by Stone in her seminal essay 'Will the real body please stand up?' (Stone, 1991). In a much-quoted passage, she offers a counter-voice to much of the technoromanticism of early 1990s cybercultural theory:

> No matter how virtual the subject may become, there is always a body attached. It may be off somewhere else – and that 'somewhere else' may be a privileged point of view – but consciousness remains firmly rooted in the physical. Historically, body, technology, and community constitute each other. (117)

Yet alongside this recognition of the primary place of the body is a searching analysis of the ways in which body and subject are re-articulated through their

immersion in the technologies of cyberspace. As she puts it, 'the unitary, bounded, safely warranted body constituted within the frame of bourgeois modernity is undergoing a gradual process of translation to the refigured and reinscribed embodiments of the cyberspace community' (523).

Not just in cyberspace, but in its wider 'analogue' contexts also, our relation to technology re-articulates our sense of our own embodiment. Communications technology offers us the opportunity to construct textual dream-bodies in chat rooms and MOOs (Turkle, 1996, Dibell, 1998), and to place graphical representations of our embodied selves, in the form of avatars, within gaming and 3D virtual worlds (Cybertown, 2000, Maxis, 2002). Bio-technology maps and manipulates the body at the level of its genetic code (Haraway, 1991b). Technological intervention at 'street' level involves us in the 'renaissance' of body modification, from the common practices of tattooing and ear-piercing (Sweetman, 1999) to the often brutal penetration and bodily re-shaping undertaken by the modern primitives (Vale and Juno, 1989). Medical science offers us prostheses and implants ranging from the therapeutic (hip replacements, artificial skin grafts, pace makers) and the cosmetic (breast enhancements, lip implants) to those – such as gender reassignment – which problematise the distinction.

Each of these instances, far from working to efface or de-privilege embodiment, functions to stress the body's 'presence'. Yet they also demonstrate the extent to which technological intervention asks us to re-consider what our embodiment means to us. When Burkitt, quoting Walt Whitman, asks 'If the body is not the person, then what is a person?' (Burkitt, 1999: 1), he might also consider the question perhaps most pressing in the age of the posthuman – 'what is a body?'.

Theoretical approaches which attempt – rightly in my view – to deconstruct Cartesian dualism must be careful not to stray too far into the territory of essentialism. While working hard to avoid this accusation, Burkitt nonetheless succumbs in his claim that 'the body is becoming an issue because, in an

increasingly fragmentary world, there is a growing desire for wholeness, for integration and for healing' (145). Bodily 'wholeness' and 'integration' become rather unhelpful terms when we consider that in the west we are surrounded every day by instances of the technological penetration and re-articulation of the body. As the examples from medical science suggest, such interventions are themselves often conducted with the purpose of 'healing'.

Hayles makes the point that the posthuman is not only about technological interventions in the body – it is also about the emergence of a new kind of subjectivity, one which owes less to the autonomous individuality of the liberal subject and more to the collectively constituted, fragmented subject of postmodernity. For Hayles, 'the posthuman subject is an amalgam, a collection of heterogeneous components, a material-informational entity whose boundaries undergo continuous construction and reconstruction' (Hayles, 1999: 3). Such a subject is formed in an altered, and intimate, relation with technological processes. Yet, as she sees it, the death of the liberal subject simultaneously opens the field for a re-introduction of the body into our considerations of what it means to be human – it is 'an opportunity to put back into the picture the flesh that continues to be erased in contemporary discussions about cybernetic subjects' (5). While working with the belief that 'human being is first of all embodied being' (283), we can embrace the figure of the posthuman as a means of 'rethinking the articulation of humans with intelligent machines' (287).

Perhaps one of the most influential examples of this kind of 'rethinking' – one which focuses very much on the way in which the body is rearticulated through its fusion with the machinic – is Haraway's conceptualisation of the cyborg (Haraway, 1991a). Haraway sees communication science and biotechnology as 'the crucial tools recrafting our bodies' (164), working to construct 'natural-technical objects of knowledge in which the difference between machine and organism is thoroughly blurred; mind, body, and tool are on very intimate terms' (165).

In the figure of the cyborg – the cybernetic organism – Haraway sees the breaking-down of the dualistic boundaries which have worked to form the western self. In presenting a challenge to our distinction between organism and machine, between nature and culture, the cyborg offers the possibility for a new politics, particularly for women, one in which the traditional 'matrices of domination' (174) are cracked open. The essentialism through which women's bodies have traditionally been defined in terms of nurturing, passivity, absence and so on, is disrupted by the 'potent fusions and dangerous possibilities' (154) represented by our 'coupling' with the machinic. Within this view, the human relation to the machine is not one of subject to object – rather it is one in which such a distinction is disturbed. Machines are no longer outside us, they *are* us:

> The machine is not an *it* to be animated, worshipped, and dominated. The machine is us, our processes, an aspect of our embodiment. (180)

This fusion with the machinic is a source both of disquietude and of pleasure – our unity with the machine is a 'disturbingly and pleasurably tight coupling' (152). In chapter three I referred to the tapestry created by Arachne as a cyborg tapestry, in the sense that it represents a transgression of the boundaries between the mortal and the immortal, and between the animal and the human. In its representation of the violent and duplicitous coupling between god and human woman, and its hints at bestiality, the tapestry shares the characteristic of edgy eroticism which Haraway associates with the figure of the cyborg. As Hayles puts it, Haraway's cyborg mingles 'erotically charged violations with potent new fusions' (Hayles, 1999: 84). This is the source of its power to disrupt logocentric unity and to offer – via the genderless, hybrid body – a new locus for resistance:

> Perhaps, ironically, we can learn from our fusions with animals and machines how not to be Man, the embodiment of Western logos. (Haraway, 1991a: 173)

Haraway's cyborg is both discursive and material – a creature of imagination and mythology (Terminator, Robocop, replicant), but also a material reality:

> Cyborgs actually exist. About 10% of the current US population are estimated to be cyborg in the technical sense, including people with electronic pacemakers, artificial joints, drug-implant systems, implanted corneal lenses, and artificial skin. A much higher percentage participates in occupations that make them into metaphoric cyborgs, including the computer keyboarder joined in a cybernetic circuit with the screen, the neurosurgeon guided by fiber-optic microscopy during an operation and the adolescent game player in the local video-game arcade. (Hayles, 1999: 114)

From its legitimate manifestations in medical science to those developments which are still prototypical or illegal (the tooth-mounted mobile phone (Sandhana, 2002), the embedded tagging chip[4]), the technological penetration of the body is therefore only one aspect of our current and future cyborg existence. Already, our everyday engagement with new communication technologies (PCs, mobile phones, PDAs) involves us in what Hayles calls a cybernetic 'feedback loop' which cannot help but work to alter our sense of our own embodiment, our positioning as material entities within time and space. As these technologies become more ubiquitous, and more mobile, so the cyborg self becomes increasingly normalised. In the image of the cyborg, 'nature and culture are reworked; the one can no longer be the resource for appropriation or incorporation by the other' (Haraway, 1991a: 151).

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[4] Though it is currently used routinely in pets and livestock (Want, R. and Russell, D. M. (2000) 'Ubiquitous electronic tagging', *IEEE Distributed Systems Online*, **1, 2**. http://dsonline.computer.org/archives/ds200/ds2wan.htm), and has been posited as an efficient and cheap device for offender surveillance (Bright, M. (2002) *Surgical tags plan for sex offenders*, The Observer online, http://observer.guardian.co.uk/politics/story/0,6903,841827,00.html, Date of access: 20 October 2003), the non-voluntary embedding of electronic tags (as opposed to those which are worn strapped to wrist or ankle) is still not legal in the UK. The 'Cyborg' projects conducted by Kevin Warwick at Reading University have, however, included the researcher voluntarily being 'penetrated' by microchips in order to explore 'the viability of a human tracking and monitoring implant' (Warwick, K. (2003) *Are chip implants getting under your skin?*, Compiler, web site, http://www.synopsys.com/news/pubs/compiler/art3_chipimplan-mar03.html, Date of access: 29 October 2003).

This problematising of the nature-culture distinction is also present in Deleuze and Guattari's concept of the 'machinic assemblage', in which bodies (human, animal and artefactual) are considered as inseparable (Deleuze and Guattari, 1988). The machinic assemblage relates to 'a precise state of intermingling of bodies in a society, including all the attractions and repulsions, sympathies and antipathies, alterations, amalgamations, penetrations, and expansions that affect bodies of all kinds in their relations to one another' (90). Tools, they insist:

> exist only in relation to the interminglings they make possible or that make them possible. The stirrup entails a new man-horse symbiosis that at the same time entails new weapons and new instruments. Tools are inseparable from symbioses or amalgamations defining a Nature-Society machinic assemblage…a society is defined by its amalgamations, not by its tools. (90)

Again, rather than seeing the tool or the technology as something outside us, as something simply useful or threatening or both, we are able to see technological mediation as something integral both to the individual and the social body.[5] Our embodiment as cyborgs, assemblages or posthumans involves the dissolution of the organic body as an essential category defining the human. As Stone holds, 'no matter how virtual the subject may become, there is always a body attached' (Stone, 1991: 117), but where that body's boundaries lie, by what incorporation of the organic and the machinic it is constituted, and what our condition as embodied entities means to us, are all now issues for deliberation rather than certainty.

Learning and teaching bodies

In the previous two sections I have been discussing theoretical stances toward embodiment in two main strands – the 'reunion' of mind with body, and the 're-articulation' of the body through its relation to the machinic. I will return to these strands shortly, when I consider the accounts given by interviewees of their sense of their own embodiment as online learners and teachers. First,

however, I wish to return the theoretical discussion to the pedagogy of the online classroom, by considering two particular approaches to the issue of embodiment in virtual learning spaces.

Eros and pedagogical bodies

McWilliam and Taylor (McWilliam and Taylor, 1997) see the online classroom as enabling a pedagogical ethos in which the role of the teacher is replaced by that of the 'instructional designer', while teaching itself is reduced to the function of 'delivery' of learning. Such reductive terminology is common, particularly in open learning discourses emerging from Australia and the United States. (It is, in fact, carried through in the terms adopted by the designers of virtual learning environment software; WebCT, for instance, does not allow for 'teachers', preferring instead to use the term 'course designer'.) Within this view, as McWilliam and Taylor point out, the teacher's 'material presence in the learning context' is represented almost as an 'impediment to learning, a stumbling block in the path of access to information' (2).

According to McWilliam and Taylor, the erasure of the teacher and, importantly, the teacher's body, represents a fundamental loss in that 'the teacher's body can come to stand for a body of knowledge and that engagement with this body can at times have positive outcomes for learners' (15). Considering what is at stake in the loss of the teacher's body is a theoretical project which moves far beyond simple nostalgia for the familiar kinds of interactions which take place in traditional learning contexts:

> It is time to consider carefully what difference a teacher's material body can make. This means pushing beyond simplistic notions of the human need for social interaction on a 'real' campus, by coming to grips with some fundamental epistemological concerns about corporeality, knowing and pedagogy. (5)

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[5] Hence the focus in this thesis on culture as opposed to instrumentality.

McWilliam extends this consideration most interestingly in a paper entitled '*Eros* and pedagogical bodies' (McWilliam and Jones, 1996) in which she and her co-author draw attention to the way in which effective, powerful teaching functions to '*eroticize* the learning context' (128). Inspiring teaching, for McWilliam and Jones, is teaching which is risky and passionate, which arouses a bodily response in learners:

> when powerful teaching evokes exciting learning in confined spaces, desire is mobilized in both teachers and learners, and this is not contained as a purely intellectual response. The body is animated, elated by the experience of powerful pedagogical moments. Desire circulates within and between bodies... If teaching-as-usual is unpleasant, dull and restrictive, then 'good', exciting, motivating teaching is erotic, passionate, dangerous, and evokes body-pleasure. (128)

To allow a place for the erotic in the classroom is a risky business, largely for the good reason that, as McWilliam and Jones put it, 'when the pleasure of learning and teaching is increased for some body, so too is the possibility of abusive pedagogy' (28). As Blake points out, the very goal of academic life can be seen as the pursuit of a particular decorum which disallows any such engagement with the personal:

> The purpose of this decorum is precisely to bracket off, to tame or even sometimes to expunge the influence of non-academic personal relations, personal interests, emotions and commitments. It is an aspect of the sustenance of academic freedom. (Blake, 2000: 188)

Yet, if we are to attempt a view which does not involve an over-simplistic commitment to the division between mind and body, we are forced to confront the issue of how learning and teaching bodies work in the classroom. If, in doing so, we leave *eros* out of the equation, as McWilliam and Jones point out, we commit to silence the potential for 'an active and critical understanding of the possibility – along with the dangers – of erotic tensions in pedagogical interactions' (McWilliam and Jones, 1996: 130). Doing so can only contribute

to students' (and teachers') inability to deal positively with the 'charged' feelings generated in the classroom.

For McWilliam and Jones, the solution is to attempt not automatically to align the erotic with the unethical, to allow a place for desire in the classroom which does not translate simply into abusive relations of harassment among teachers and learners:

> Performance indicators, punitive measures and platitudes cannot hope to solve the problem of abusive pedagogy on campus or anywhere else, because they do not grapple with the ambiguity of *eros* as the *circulation* of power and desire in the university classroom. Powerful teaching has always been ambiguous and duplicitous. Moves to separate the 'good/ethical' bits from the 'bad/unethical' bits need to be sensitive to what students stand to lose, as well as gain, if *eros*, physicality and harassment are conflated as all of a pedagogical piece. (136)

McWilliam and Jones appear to view the online classroom as the logical extension of a general move toward blandness and safety in pedagogical approach. The ethical and legislative disallowing of the 'maddening...fascinating...bullying' eccentric in favour of the 'clinician with the charisma by-pass' (136) extends neatly into an online context where the body of the teacher is 'erased' completely. The 'virtual' classroom will be, they say, a space where 'future teachers have no body to teach (with)' (136). Here, however, they fall into the familiar Cartesian trap of equating the invisibility of the body with *lack* of body. As we know, virtual subjects always have bodies attached, and mind and body are not so easily put asunder. While their discussion of the place of *eros* in pedagogy is convincing, McWilliam and Jones present no compelling argument to suggest that passionate and risky pedagogy cannot take place online. In fact, they undermine their own argument by highlighting the internet as an 'eroticised' zone, but one which demonstrates purely negative instances of the workings of the erotic ('if only there were not already so many reports of harassment on the Net!' (136)).

If we acknowledge that the internet provides spaces where erotic relationships may be initiated and sustained we might, following McWilliam and Jones, also have to admit that it contains spaces where intense pedagogical relations may take place. In their convincing focus on the 'importance of the anatomical body of the teacher as the site/sight of authoritative display' (Angel, 1994 quoted in McWilliam and Jones, 1996: 135) they perhaps fail to give equivalent consideration to how relations between learning and teaching bodies are reconfigured – rather than erased – by the mediations of technology.

Teacher incarnate

The riskiness and danger that McWilliam and Jones associate with powerful learning experiences are also a preoccupation of Dreyfus (Dreyfus, 2001) in his analysis of the inadequacy of learning which takes place without the embodied presence of the teacher. The latter's discussion takes place within rather different terms than McWilliam's – which is strongly driven by feminist theoretical perspectives – but shares some of its central concerns.

Dreyfus draws on the work of Merleau-Ponty (Merleau-Ponty, 1962) to emphasise the centrality of embodiment to our ways of understanding and dealing with the complexities of our environment. Sharing the project to contest Cartesian dualism, Dreyfus stresses that '*intercorporeality*' (Dreyfus, 2001: 58) [original italics] – face to face, embodied human interaction – is an inextricable element in meaningful learning. For this reason, distance and technology-mediated learning can only ever occupy second place to the immediacy of the face to face, on-campus real thing. In his seven stage model of the progression of student learning (from '1: novice' to '6: mastery' and '7: practical wisdom'), the distant learner can only ever achieve stage 3, 'competence' (33-49). Partly, this is to do with the fact that distant learners do not have access to the body of the teacher:

> only emotional, involved, embodied human beings can become proficient and expert and only they can become masters. So, while

> they are teaching specific skills, teachers must also be incarnating and encouraging involvement. (48)

In this view, the body of the teacher functions as a symbol of, and conduit for, the 'body of knowledge' (McWilliam and Taylor, 1997: 15). If students are to have access to high-level skills and knowledge they need 'teachers who *incarnate* the skills and wisdom that mark the highest levels of human accomplishment' (Ess, 2003: 131) [original italics].

The inadequacy of distance learning is also, for Dreyfus, to do with the place of risk and commitment in learning relationships. Learning, he argues, cannot take place unless learners are prepared to place themselves on the line, to open themselves to the risk of ridicule and public error as they discover and negotiate new ideas. While such riskiness is built in to the functioning of the face to face classroom, technology-mediated learning, he claims, works rather to distance the learner from making this risky commitment. Thus it limits the extent to which he or she is able to learn at all. In the classroom or lecture hall, 'there is the possibility of taking the risk of proposing and defending an idea and finding out whether it fails or flies. If each student is at home in front of his or her terminal, there is no place for such risky involvement' (Dreyfus, 2001: 39).

Dreyfus' book has value as an accessible discussion of some of the philosophical arguments underlying embodiment issues in learning contexts. In a sense, however, it does relatively little for this project, since its few grains of wheat are mostly lost in sackfuls of chaff. Dreyfus does not, for example, offer a convincing argument as to why risk cannot be a factor in online interaction. Many academic staff and students have experienced the trepidation and bravado involved in posting ideas to public or class message boards, chat rooms and mailing lists, as well as the excitement or dejection prompted by the responses those ideas receive. If proposing an idea in class involves an element of risk, how much more nerve-wracking is it to propose an idea to a global network? Those who have experienced the emotional furnace of flaming know that online interaction is far from the passionless, bland event that Dreyfus determines it.

The fears and passions involved in online learning spaces are very much felt by students and teachers, as this and previous chapters demonstrate. To state this point more fully, I include some verbatim accounts of the humiliations and vulnerabilities experienced by students in online learning spaces in the coda to this chapter. These supplement the more detailed consideration of accounts of embodiment issues given in the following section.

An element of Dreyfus' preoccupation with risk is his focus on face to face learning spaces as sites in which learners can build relations of trust – the trust between embodied individuals which enables risk-taking behaviour to happen:

> it seems that to trust someone you have to make yourself vulnerable to him or her and they have to be vulnerable to you. Part of trust is based on the experience that the other does not take advantage of one's vulnerability. I have to be in the same room with someone and know that they could physically hurt me or publicly humiliate me and observe that they do not do so, in order to feel that I can trust them and make myself vulnerable to them in other ways. (71)

Burbules critiques this stance effectively when he writes that, 'it simply must be said that only certain people have the luxury of thinking this way, that purposely putting themselves in the way of physical harm is a way of building trust' (Burbules, 2002: 391). There are anyway, he argues, ample opportunities for 'harm' and 'humiliation' online. Equally, embodied interaction can be painful and difficult for those who, because of disability, illness, shyness and so on may find the online mode far more open and free. 'Here', writes Burbules, 'as elsewhere in these sorts of arguments, claims about which mode of interaction is "better" must always be tempered by asking, "better for whom?"' (392).

There is indeed something rather odd in the image of Dreyfus, a well-respected, secure, long-established male academic, getting misty-eyed at the prospect of a vulnerability that many others in academia – teachers and students – have to work hard to protect themselves from. If *eros* has a place in the classroom, as McWilliam and Jones argue, it is surely not in its sado-masochistic form. Dreyfus does not take an explicit stance on desire and its circulation in

pedagogical contexts, limiting his discussion of the erotic to a squeamish disavowal of machinic fusions:

> Whatever hugs do for people, I'm quite sure telehugs won't do it. And any act of intimacy mediated by any sort of robot prosthesis would surely be equally grotesque, if not obscene. (Dreyfus, 2001: 69)

Risky as it is, the dangerous eroticism of Haraway's cyborg has no place in Dreyfus' scheme.

Most fundamentally, perhaps, Dreyfus' contribution is open to criticism in that it falls into the same trap as McWilliam and Jones, in its assumption that the internet is a space where we 'lose' our bodies:

> We should remain open to the possibility that, when we enter cyberspace and leave behind our animal-shaped, emotional, intuitive, situated, vulnerable, embodied selves, and thereby gain a remarkable new freedom never before available to human beings, we might, at the same time, necessarily lose some of our crucial capacities… Indeed, in what follows, I hope to show that, if our body goes, so does relevance, skill, reality, and meaning. (6-7)

Rather than making an effective refutation of the view that information and matter – mind and body – may become free of each other through technological mediation, Dreyfus merely confirms the positions taken by commentators such as Barlow and Moravec by colluding in their stance that, in cyberspace, we 'leave behind' our bodies. How can we abandon our bodies when, however they may be worked upon by the 'alterations, amalgamations and penetrations' (Deleuze and Guattari, 1988: 90) of technology, they constitute the material locus upon and within which thought takes place? Dreyfus' investment in the metaphysics of presence (revealed in his assumption of the value of the spoken over the written word) (Derrida, 1976b, Blake, 2002, Standish, 2002) is accompanied by a tacit reaffirmation of the Cartesian dualism he claims to contest.

Despite its serious faults, Dreyfus' text is helpful in as far as it highlights some of the losses involved when bodies are distanced from each other; its problem is that it gives no consideration to possible gains. Clearly, fully intercorporeal encounters are unlikely ever to be reproduced online. As I have stressed throughout this thesis, I believe it is a mistake to look to computer-mediated interaction as a way simply of replicating teaching methods and modes of communication that already take place face to face. The difference of the virtual classroom rests in the fact that when we work in it, we work with a particular articulation of body-text-machine. What embodiment means to us within that environment will differ from what it means to us in the face to face classroom. As Burbules points out, we gain very little by retreating into the kind of 'bodily determinism' (Burbules, 2002: 393) that Dreyfus favours. Rather we should look to the virtual classroom as 'a fascinating zone of experimentation in how people can move beyond these embodied physical facts, not for the sake of "escaping" them or denying them, but for *changing what they mean to us and to others*' (393) [original italics].

Thus we are confronted with the need – highlighted by Hayles (Hayles, 1999) – to maintain a focus not simply on 'the body' but on 'embodiment'. If we see the body as a normative category which 'gestures toward a Platonic reality' (196), embodiment may be perceived rather as taking its meaning from individual specificities of 'place, time, physiology and culture' (196). As Hayles points out, the two terms rarely coincide exactly with each other. She provides the powerful example of the early twentieth century cultural construction of the vaginal orgasm (in Freud and the work of DH Lawrence, among others) and individual women's response to it:

> Some women disciplined their experiences to bring them into line with the concept; others registered their experiences as defective because they were other than the concept; still others were skeptical about the concept because it did not match their experiences. (197)

Thus the vaginal orgasm, a discursive construction of 'the body', interacts with and against individual women's articulation of their experience of their own

'embodiment'. Making this distinction between the two terms allows us to focus on embodiment as a way of concentrating on the particular (197) while avoiding the kind of determinism practised by Dreyfus. The following section, which considers individual accounts of the shifting meaning and significance of embodiment online, attempts such an approach.

Accounts of embodiment in online learning spaces

In charting some of the theoretical territory surrounding the issue of embodiment, I have attempted to highlight two main strands which exist sometimes in tension and sometimes in synergy with each other. First is the project of countering the Cartesian dualism which sets up a relation of opposition between body and mind. Second is that stance which sees the collapse of the boundary between the technological and the natural as effecting profound changes in the means by which our experience of embodiment is constituted.

These two strands run very clearly through the accounts students and teachers gave me of their experiences online, and for this reason I will present these accounts in two main sections. The first reflects the problem of the 'screening' of the body inherent in many instances of technology-mediated learning; in learning online, some teachers and students experience frustration at the lack of visibility of the embodied self, a frustration which translates into an unwillingness to conduct the business of 'genuine' learning without each other's embodied presence. The second strand relates to the way in which learners speak about the technology positively, as enabling a different articulation of their embodied selves. The accounts in this strand stress a shift in the meaning and impact of embodiment on learners through their immersion in the cyberspace classroom.

Far from being exclusive of each other, these two broad perspectives are intertwined – often both are voiced by the same individual. Taken together, they

represent another area of tension which must be negotiated as the academy shifts into the digital domain.

'I can't use my body': the losses of distance

Body language

I don't know how to say it but it's something that doesn't make me comfortable. it should be the other way round I know because I'm in my room and there's just my computer and everything, but I don't feel comfortable, I feel more comfortable when I'm talking to someone, because then I can use my body language, you know, I can use my face expressions or when I'm on the computer I feel like the other person may not get the point.

right, is that the source of your discomfort, the fact that you might not be achieving some kind of proper communication?

yeah and it's also that the other person doesn't see me? and I don't see the other person. its the other way around, so I don't know what they're doing, you know, I don't know, I don't feel comfortable, because maybe they're saying 'what's she talking about?' you know, 'that's not the issue' or you know like laugh at me because of something I'm saying, so in that sense. I don't know what the other person is doing at the other side of the computer, so I don't feel comfortable in that sense.

ok, so would you say that learning online liberates you or constrains you?

um, [pause], instantly I would say it constrains me, and then you ask me why! [laughs]

why? [laughs]

because I can't use my body! you know I can't use my you know, body language, I can't use my hands or I can't like say things twice I just you know it's just it's just the language I'm using, like language you know a language! d'you know what I mean? **Paulina**

In this account, as in many others, the predominant sense is that to see your interlocutor is to know them. Paulina's sense of frustration seems to emerge from the fact that online there is no way of visually accessing the body of the person 'at the other side of the computer'. Likewise, the screen prevents her interlocutor accessing Paulina's body, the expressive movements of which Paulina perceives as being as profoundly communicative as verbal language.

For Paulina, a source of discomfort in the online mode is the way in which communicating through the screen forces her to construct for herself the emotions and responses of the person with whom she is 'talking'. The problem

here lies in her tendency to construct those emotions negatively, in terms of the other person disagreeing with her ('that's not the issue') or laughing at her. This issue of being forced to construct for oneself the responses of the other came up again in my interview with Megan.

I don't know it's just that the way you think about it, because it's on the screen, you think it must be almost like a soap opera, the fact that things go on that eh you can't see happening, you just hear about it, you just read about it, it's like it's not real. because there's no actual emotions, because it's just words, you can't see facial expressions so em it's not real. you can't see people thinking about things or em or arguing, like getting in an argument it's all just words.

but you must know that there are emotions going on

yes but it's behind doors, they're they're not kind of *with* the words, they're separate somehow, because it's on the screen and it's not, it's not, you're not seeing and and hearing at the same time, you're reading the words and then you're thinking about what emotions come with it, rather than seeing it at the same time.

[side 1 of tape ends]

yeah, the fact that you only see the words, you don't see how they react to the way they've said it or you can't see their reaction to what you're saying, if you see someone act shocked you can see it in their face or in the way their body language, you can tell how they're reacting to what you've said or what's being said, whereas online it's just words and through the words you think about what they're thinking, but it's not happening at the same time.
Megan

Communicating online is perceived here as being an interpretive act in a sense that intercorporeal communication is not. The loss of the language of the body leaves 'just words' – a phrase Megan repeats three times – resulting in a communicative act that is 'not real' in the sense that its emotional contexts are purely constructed, a matter of interpretation. It is possible to see this perspective as illustrating Megan's immersion in the metaphysics of presence, the stance which privileges the spoken over the written word, and sees authenticity as being guaranteed by the presence of the body of the speaker. It was often impossible for my interviewees to express exactly why they felt so strongly the value of face to face communication. Sarah, for example, was literally brought to a halt:

if it was for something more serious like even a supervision for a dissertation I think you would have to have someone face to face. at least once or twice just to be able to [pause] I don't know. I don't know why!
Sarah

According to Derrida (Derrida, 1976b), presence is associated with the logos, with origin and the grounding of signification in secure foundations of meaning. In previous work I and a co-author have suggested that:

> resistance to the loss of face to face teaching can be seen as attributable to a generally unexpressed awareness that computer-mediated communication undermines the position of speech over writing, and in doing so also undermines the entire realist and humanist perspective from which, in Western culture, we construct ideas of truth, presence and subjectivity. (Land and Bayne, 1999)

Students' often extremely strong preference for face to face modes, accompanied by the difficulty many of them found in articulating reasons for it, does indeed hint at a deep-running engagement in the privileging of the spoken over the written word. If deconstruction's project to undermine the presence-absence hierarchy was successful in terms of the philosophy and theory of the late twentieth century, it appears to have had little effect on the way in which the individuals I spoke to perceive of the authenticity of their online exchanges. Whether we understand learners and teachers as still being thoroughly entrenched in the metaphysics of presence or whether, like Hayles, we perceive of the presence-absence dialectic as having exhausted itself,[6] we must recognise the purely written characteristic of computer-mediated communication as being a significant obstacle for learners like Megan. The screen functions for many as a barrier, a surface which, in masking the body, works to limit the intensity of interpersonal contact. To this extent, Dreyfus' and McWilliams' articulation of the losses of distance are echoed in the words of learners.

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[6] Hayles writes, 'One feels lack only if presence is posited or assumed; one is driven by desire only if the object of desire is conceptualized as something to be possessed. Just as the metaphysics of presence required an originary plenitude to articulate a stable self, deconstruction required a metaphysics of presence to articulate the destabilization of that self' (Hayles, N. K. (1999) *How we became posthuman: virtual bodies in cybernetics, literature and informatics,* Chicago: University of Chicago Press). Hayles proposes the supercession of presence-absence by the very different logic of pattern-randomness.

I sometimes feel when you put words on the screen and people like look at them, they're no seeing your face, they're no seeing your expression, so therefore they may be, if you worded it slightly wrong, could get the wrong feedback off it, you know, could maybe be hurt by what you've said, whereas if you actually speak to them face to face you can explain it better, than there is, you know, on the screen. I just feel I'm speaking to this screen. I find it quite difficult at times.
Heather

The teacher's body

The emphasis placed by McWilliam and Dreyfus on the importance of the presence of the teacher's physical body to learners is also reflected in many accounts.

I don't know I just think it's so much better to have like face to face interaction than have a sort of writing down thing, 'cos you don't know who you're talking to you know, you if you never if you never meet your tutor, you won't know what they look like or, y'know, I think these things are important, especially 'cos I mean I think when you come to university you come in and I think through school and primary school and maybe even through when you go to work, when you start here you always look to your tutors and stuff and you like look at them, you're not judging them but you're sort of looking at them for like how to act and how, you sort of try and pick up things that they do, y'know basically you I think it's really important.

so you can do that better face to face than online? pick up

yeah I think so. um I think it's so sad really, upsetting sort of, y'know you could just sit in your house all day just 'o well I'll just click online there for the tutorial'. I think that's really sad 'cos, y'know I think you have to get out and see people and speak to people and stuff it's I just think it's so important. I think that basically you're always not dependent but you're always looking at the person above you and thinking 'how would I do that?' y'know what I mean you always have higher goals in yourself and you always want to be like that person. and you don't I don't think you get that.
Marina

For Marina, it is the presence of the teacher's body that distinguishes meaningful face to face interaction from 'a sort of writing down thing'. Rather than focussing on the loss of the social cues and communicative richness of body language, she emphasises the importance of being able to *look* at the teacher in order to learn from their embodied presence the right way of acting and of being. The body of the teacher – the 'site/sight of authoritative display' (Angel, 1994) – becomes a locus for the aspirations of the learner ('you're always looking at the person above you and thinking "how would I do that?"').

Paulina's stance is similarly teacher-focused.

if you have a tutor, and someone that is teaching you something you expect this person to be more knowledgeable than you are, and they have to have some skills that you don't have. so if you don't know this person, it's just you know it's just weird, cos you don't know, you maybe, you just don't know if you can respect them or not, or you know it doesn't all that um all those skills that you kind of get by talking to someone or all those like the way you understand that person just by seeing him or the way he moves or whatever, then you're missing that side.
Paulina

Again there is an emphasis on the idea that you cannot 'know' someone without seeing them. The way the teacher moves, the 'skills' that he or she nurtures in learners simply by talking to them, the superior knowledge possessed by the tutor, the 'respect' he or she demands – all these things are inaccessible to the online student distanced from the body of the teacher. Even students with a less elevated view of their teacher may look to his or her body as a focus for group bonding around a learning experience:

ok, in general terms d'you think you'd prefer to learn online or face to face?

hmmm. face to face.

can you identify why?

hmmm. well I think it's the learning environment and being together with other people and and seeing the expression on their faces and going for coffee in between and talk about the tutor and how he always picks his nose or whatever things like that. I mean this is what um what makes learning fun, in a group.

so how real does your tutor feel online to you?

well I think he's always the tutor and not really a personality or a human being. it just it's not very real, he only comments on the work, but I don't really know him as a personality is what. which can be an advantage if somebody for example if I don't like the tutor or don't like their face or I mean there are so many aspects that we take in when we see somebody, the gestures they make and everything, um but I think I prefer the real situation.
Cornelia

Even a bodily present teacher whose primary characteristic is nose-picking is superior here to an online tutor who fails even to make 'human being' status. Much as the accounts in chapters four and six revealed students' and teachers' questioning of the 'reality' of digital texts and authorships so, here, the teacher in the cyberspace classroom is represented as lacking in authenticity.

The coda to chapter five briefly suggested that approaches which emphasise student-centred learning are problematic in the sense that they tend to work with the tacit assumption that the learning subject is a purely autonomous entity. The task of the teacher is often cast in terms of 'enabling' the learner to reach his or her 'full potential' with no sense that such potential may emanate from anywhere but the innate ability of the individual. The 'student centred' approach is problematised in another sense by these accounts, which indicate that the teacher provides a focus and anchor to the learning situation in a subtle way which is not to do with his or her traditional, often discredited, role as 'transmitter' of information. That the student-teacher hierarchy is equalised online is clear from these accounts, but what is also clear is that this 'flattening' is not necessarily welcomed by learners. The accounts given here are those of students who look to the authoritative, physically present teacher's body as the conduit through which desire – for learning, bonding, connection – is realised.

'It's just impossible online to know what's going on'

My discussion of interview texts has so far concentrated on the perspectives of learners. Teachers also, however, voiced an awareness of the losses involved in teaching online, most strikingly in terms of the way in which their 'sense' of the mood of their classes – and their ability to control them – depended on bodily present students.

I don't think I was very good. I think I'm much better at like teaching face to face. it's like the sort of associations that you do when you teach face to face, you sort of know whether students are enjoying what you're talking about and are interested and then if they are interested you can go into it more. you can't do that, you don't get the immediate feedback. I imagine the points I made got lost in the ether, they weren't replied to, in the same way that they were in tutorials and I wouldn't be able to sort of back them up or.
Diane

The immediacy and intimacy of the face to face classroom enables Diane to 'sort of know' whether the class is going well and whether or not the learners are engaged. Whereas she will always get a response from students in the

conventional classroom, online her points tended to get 'lost in the ether'. Again, the authority of the teacher is diminished online, where the masking of the teacher's body accompanies an inability to demand a response. The cyberspace classroom provides students with far more opportunities for ignoring their tutor.

For Des also, the ability to intuit the mood of the class depends on their physical presence:

I mean I tried all the time to keep away from thinking about how would you, y'know 'this is what I would do if they were face to face' but in a face to face tutorial you can see if people are having problems, you can see why they're not responding and if they're not there well you know they were absent that day because, you can still I mean [sigh] you can track them 'cos you've got all the you can see how many times they've read the y'know when they last logged on to the system and all those sorts of things but eh y'know you don't really know an awful lot about how many problems they're having and lots of them don't tell you 'o I'm having problems with this' 'til it's all finished so I just felt that actually the kind of facial, just having face to face contact and seeing their demeanour and how they were reacting in that situation y'know you can tell straight away whether you've lost them or it's too easy or they're getting bored or or or what's going on, it's just impossible online to know what's going on.
Des

Here, Des does not voice Diane's concern about the weakening of his authority online, but he does share her sense of the way in which the non-verbal responses of the face to face class enable him to shape and direct his teaching. Dreyfus calls this the 'shared mood' (Dreyfus, 2001: 61) of the classroom, and describes how a good teacher will not only be sensitive to this mood, but will be able to manipulate and adjust it. In this, he says, the role of the teacher is like that of the actor in the theatre:

> Presumably, the actors, like good lecturers, are, at every moment, subtly and largely unconsciously adjusting to the responses of the audience and thereby controlling and intensifying the mood in the theatre. (61)

Again, the issue appears to be about control of the classroom. As Des's extract reveals, however profound the disciplinary effects of online surveillance may be – I discussed these in the coda to chapter five – they cannot replace the subtle

knowledge of the physically present class which the teacher is able to nurture and use as a means of controlling and directing the pedagogical event.

I do not use this insight to make a qualitative judgement about the relative 'goodness' or 'badness' of the online classroom. I do not believe that learning online is either inherently liberatory or inherently inferior. My point relates to the idea that the flattening of the teacher-student hierarchy online is disturbing both to learners and their tutors. Expectations of learning situations on both sides are still dependent on the position of the teacher as a site of authority – a 'site/sight' confirmed by his or her embodied presence in the classroom. Thus rather than embracing 'e-learning' as somehow determining a 'student-centred' approach defined in wholly positive terms, we should be thinking about the re-positioning of power relations online as being one of the most deeply problematic facets of the shift into the digital. In enabling a reversal in a hierarchy which has always dominated pedagogical relations – one that might also be expressed in terms of the presence-absence opposition – the online mode disturbs the foundations on which the academy is constructed.

This point rests clearly within the terms and arguments I have been using throughout this thesis. Yet my primary concern in this chapter is to do with embodiment, and the necessity of 'putting the flesh back into the picture' (Hayles, 1999: 5). It is possible to do this without desiring a simple return to the long-established certainties of the face to face classroom, or by placing faith in the increased telepresence promised by future technologies, by looking to the online learning environment as a space of difference. In doing so, we would not seek an equivalent to the intercorporeal pedagogical encounter online, and then lament its failure to materialise. Instead we would find ways of being and learning which work with new articulations and new understandings of embodiment and its significance. To attempt a beginning in this, I turn now to the second strand of my interviews – those which demonstrate a shift online in the meaning and impact of embodiment on students' sense of self.

Bodily difference

The 'young female attractive thing'

Earlier in this chapter I criticised Dreyfus (2001) for his stance that the online mode is inferior because it protects students from the risk involved in fully intercorporeal learning situations. As I quoted Burbules (2002) as suggesting, the embrace of vulnerability is a luxury that only the secure can afford. In speaking about their experience online several students highlighted the way in which the mediation of the screen afforded protection from the vulnerabilities and insecurities which dogged them in the embodied, real-time classroom.

overall d'you think you'd prefer to learn online or face to face?

probably online, because of the confidence thing. it's not so bad to ask embarrassing questions, because if you ask a stupid question you feel stupid and you get embarrassed, you don't wait for an answer you just leave whereas if it's online it's just like it's only words they don't seem real it's not you so it's not too bad.
Megan

The focus on the purely textual nature of the online mode which characterised the quote I used from Megan in the previous section is reiterated here. Now, however, while the lack of embodied presence and dependence on 'words' reduces the authenticity of the exchange ('they don't seem real'), they also function to protect her from the deeply disturbing prospect of speaking up in class. This quote is only three and a half lines long, but twice stresses her feelings of 'embarrassment' and 'stupidity' in class. The protection offered by the screening of the body, and the location of the learning experience in a purely textual form, offers the opportunity for Megan to work with an alternative articulation of her self which *is* able to speak up ('it's not you so it's not too bad'). This almost total separation of the online subject from the embodied subject is reminiscent of Charlie's stance, quoted in chapter three:

[online] you just type it in anyway, and press the button, 'cos it's not like you're actually saying it at all, so it's not you, it's like you're just a name, people won't attach it to, like, who you are.
Charlie

In claiming that online 'it's not you' these students describe the emergence of a very different subject which we might describe in terms of the cyborg self – one which is so highly mediated by the technological environment that the conventional opposition of presence-absence does not apply.

If Megan's preference for the online mode is expressed in terms of it offering fewer chances for her to be confronted with her 'stupidity', it also seems to offer protection from a sense of physical vulnerability, as an extract taken from slightly earlier in the interview demonstrates:

there's not so many emotions involved, you can't see their facial expressions, you can't see if they're upset or if they're angry, or or whatever. em you don't have to look at them, you don't have to, you know, you can shut it off if you don't want to to read their messages, you don't want to reply, instead of having to walk away like and they could chase you or whatever, when they try to say stuff back you don't have to read what they're saying back, you know you can say 'that's it' and it's much easier just to walk away from it than if someone's there with you.
Megan

Megan rehearses here, in negative terms, some of the characteristics of body language which were described positively by students in the previous section. If to see someone is to know them, it is also to be forced to confront their aggression or distress ('you can't see if they're upset or if they're angry', 'you don't have to look at them'). What is most striking about this extract is Megan's suggestion that physical pursuit might result from an embodied encounter ('they could chase you'), that her sense of vulnerability – and her protection from it online – is equally emotional and physical.

My final extract from Megan's interview relates to the issue of judgement, which is taken up again below.

you've already said that you see yourself as more confident, are there any other ways in which you think you're kind of different online?

well people can't see you, so it doesn't matter what you look like, whereas you know people don't judge you as much on what you look like, or what you're dressed like, or whatever they just listen to what you say and not make so many judgements on other factors. so I think it does, people listen to you more. 'cos you see it within groups, the more good-looking people tend to have more attention like from everyone, everyone

just talks to them more, whereas online you're all the same, so people will listen to everything you say rather than like listening and um always looking at someone else.
Megan

The attraction of the online mode for Megan here is in its ability to subordinate looking to 'listening'. The point she makes is an important one that is not fully dealt with by McWilliam and Jones (1996) in their analysis of *eros* and pedagogy – positive force though it may be, desire in the classroom is unevenly distributed. Embodied and face to face, Megan is silent, possibly neglected, feeling vulnerable, 'stupid' and 'embarrassed'. Online, she speaks on terms which to her feel far more equal.

Marianne's experience of the physically present class is expressed in similar terms, though from a different stance:

I think there are times y'know there are times when being online, communicating with people online I've sort of enjoyed not being embodied, I've enjoyed not having the kind of, thing about having to be you know, young female attractive thing. and I've it it can be quite liberating not having to do that. not having to play that role, in fact it *is* liberating but but the thing is I don't have many worlds which are completely online, at the moment. most of my worlds are intermeshed.
Marianne

If to see a person is to know them, feminism has taught us that to see an embodied female is often to 'know' her in terms of her physical attractiveness or sexual availability. For Marianne, that 'there is always a body attached' (Stone, 1991: 524) is a cause for some lament. While the online mode offers a freedom from the expectations generated by her embodied presence, opportunities to communicate from within a differently articulated sense of self are limited by her inhabitation of other, corporeal 'worlds'.

Judgement

Megan's sense that to be online was to be free of the judgement others bring to bear on the embodied individual was articulated by several students.

yeah well, I think everybody judges everybody, em, and, online you're totally anonymous, you're all totally you know what I mean you're, everybody's, wearing the

right type of clothes, or everybody's got the the right type of, I don't know, bag or hairstyle or whatever you know what I mean, it's you're all sort of equals whereas, you know what I mean in general people, everybody judges you it's not a kind of, you do it you're thinking 'o yeah I don't like that person cos you know' I mean maybe in sort of primary school or something but you know not like now, you just sort of take people for, you know you do sort of subconsciously judge people you sort of see what they're wearing and, how they y'know you can judge people on their accents, like 'o they're from there so they must be like the stereotypical people from that area', and stuff y'know, whereas online you you don't have this you can't, you have no basis on which to judge people, y'know, which I think is quite good. so.
Marina

Anonymity for Marina correlates to equality. Online, the signifiers by which a student's position in the hierarchies of the classroom is established (clothes, bag, hairstyle, accent) are rendered invisible. A body which is not visible cannot form a basis for judgement and discrimination. For Sarah also, the attraction of the online mode is in its tendency to disallow judgement based on anything other than the student's ability to contribute verbally to class discussion:

I suppose there's something about, if you think you're funny or whatever and I do think I am sometimes, again because of the whole freedom thing you can make jokes or be clever online and there's no danger of somebody, ok they could criticise you online, but because it's not, it's almost like it's not real, they're not seeing you, the only judgement they can make on you is what you've written, they can't make any other judgement on you, your appearance or anything like that, so it's almost like it's safer, you can change your whole personality.
Sarah

Here, 'being clever' is perceived as a dangerous endeavour, something which might lay Sarah open to criticism in a face to face classroom. Online, though the criticism might still come her way, it is 'not real' because the critic is 'not seeing you'. As in many of the accounts I have presented, invisibility and inauthenticity are linked. Here, however, the result is an online environment which is 'safer', since judgement of 'what you've written' cannot be accompanied by criticism of 'your appearance'. It is perhaps striking, though not surprising, that the comments I received relating to embodiment, vulnerability and judgement were all in interviews with young, female students. For this group, the power of criticism and negative judgement have significant power to silence, a power which seems to be associated with the rawness of vulnerability around issues of physical appearance. For students like Sarah, the online classroom offers a space where there is some protection from this. Here

again, bodily invisibility offers opportunities for a differently articulated subjectivity.

A previous section of this chapter included a quote from Paulina which described her tendency to construct the emotions of her interlocutor negatively online. One of her concerns was that she could not know whether the person she was 'talking' to was laughing at her. For Alison, however, being in digital space offers a freedom from having to care about whether she is laughed at or not. The confidence she has gained from the experience of being at university is consolidated and extended by an altered sense of self in the online environment:

I feel like I can say what I'm thinking much more. em just like what I've been saying before basically, I mean I do feel different being here and I feel y'know more confident with just being at university, and the whole being at university thing is quite surreal to me still, so it's like that's sort of probably the same as how I feel online, just I feel like I can just be myself, and you don't have to worry about people laughing at you. I mean they can laugh at you but you don't know they're laughing at you, which is ok, you know!
Alison

Conclusions

It would have been reasonably straightforward for me to have concluded this chapter with the assertion that the structures of higher education depend on the kind of stable systems and hierarchical relations which may be defined in terms of the metaphysics of presence. Thus, the argument made in this chapter would reflect that I have made throughout this thesis, which is that the potential of internet spaces to offer alternative, looser (because not visibly embodied) modes of subjectivity construction is brought up short by the incompatibility of stable institutional structures with the mutability of the online mode.

To take this stance would be to see the disquietude relating to the invisibility of the body described in this chapter as being a result of the immersion of learners and teachers within the metaphysics of presence. The accounts which describe a positive shift in the meaning of embodiment in the online classroom would be seen as a glimpse into a realm of digital possibility which is largely denied in

the dominant discourses of the academy, with its largely instrumental uses of digital technologies for learning.

Yet such a stance – though valid up to a point – would be largely incompatible with the theoretical perspectives I have used to shape this final chapter, which look to embodiment as an issue largely, and unjustifiably, neglected by theory which focuses on the wholly discursive constitution of human subjects. These perspectives have stressed how our embodiment is the material basis we depend upon in conceiving of ourselves as living, communicating, conscious entities. They highlight the idea that it is not possible to explain the complex relation between embodied subject and technological environment in terms which are purely linguistic. It is perhaps appropriate, therefore, that in concluding this final chapter I do not bring my argument full circle but rather indicate the possibility for a spiralling off into different theoretical areas and alternative approaches to exploring the cultural implications of the university's shift into the digital.

I began this chapter with the image of Echo, a faded body and a voice with no autonomy. My journey through theories and perspectives which have sought to return the body to the voice has ended, appropriately enough, with a series of extracts which describe the voice itself as finding an independence which the mythical figure never achieved. Thus the two strands I have tried to emphasise throughout this chapter are intertwined and interdependent; to seek to remember that, in cyberspace and elsewhere, mind and body are indivisible entities is not to prevent us from looking to new technological environments as spaces where the conventional constraints and significations of embodiment can be challenged and shifted.

Chapter 7a coda

Accounts of vulnerability and humiliation online

I remember sending a message in about learning, about a problem I was having with the module, and it was actually my first ever experience of sending a an a message up to a message board, and it disappeared it disappeared into a black hole.

no response to it?

there was no response.

so what did you do?

I felt really crap, and I felt really a bit embarrassed like 'have I said something really naff?' and then I felt a bit angry, and then I thought 'well, actually what's going on here is it's just a clique, it's this group of four or five people, older people, who are using it to talk about something that I'm not interested in'. and from that time on I never really used it. it wasn't doing anything for me. there was no discussion of content, it was just. that was a horrible first, it was a horrible first experience of using technology for learning.

you have quite strong feelings, it provoked quite strong feelings

o yeah, it did at the time yeah. I felt really horrible.
Marianne

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but FirstClass is really good cos you can have like some good conversations. I mean I know my flatmate she does journalism, and she's like a big fan of football and she'd been brought up supporting Rangers and she ended up having this fight with this guy online and it's just like 'o my god!' cos this guy was like totally having a go at her like 'what d'you know about football? you're just a girl, you only like them cos like they're men they're they wear shorts and you just want to watch their legs' and it's just like, y'know she's been brought up watching football since she was born and it's just.

d'you think that sort of thing would happen face to face as well or d'you think it happened cos it was online?

probably it would've just happened because it's online cos I don't think anybody could have the nerve to say that to somebody to their face. I mean I know I would never say that to somebody but.

why d'you think that is, why is it easier to say it online than face to face?

because you can't look at somebody, what you're saying you're saying to a computer, you're not saying it to another person, well you know this other person might not exist, you might not know where they, come from. you don't really know who they are in lectures either. so it's just.

it's anonymous?

yeah.
Daisy

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em, there's been quite a lot of em, people have been abusing the fact that you know you don't, you're not face to face so people have been getting a lot more braver, I've seen not just in my tutorial group but in other tutorial groups and in the other big chatrooms that, people have got, sort of quite opinionated and there's been sort of kind of, people have been sort of slated on it and people have stepped in, other people have stepped in sort of and said 'calm down' and that but, I think that's quite bad because my friend was personally like she was basically singled out by someone who wasn't in her tutorial group and, was basically said y'know 'how can you sort of say that blah blah blah blah' and it's quite hurtful that sort of thing I think that that's quite bad. em

why d'you think that's, well do you think that happens more online than it would do face to face?

yeah definitely. I I definitely that wouldn't have occurred if it was face to face. I mean something may something may have been said like some kind of gossip or y'know something may have been said, but if anything had been said it wouldn't have been a confrontation. and it wouldn't have been a sort of very public, out there see it was someone from a separate tutorial group and generally you don't put anything else in someone else's tutorial group, and they came and copied it and emailed it, what was written about my friend and em basically said 'what're you talking about? of course it doesn't have this, of course it's not that and' just basically sort of, basically slating her and it was quite hurtful for her so, I don't think that would've happened no.

why is that d'you think? why's it easier to do that kind of thing online?

cos people get more brave because y'know you're not face to face, that you can distance yourself, you're not having a confrontation face to face, you're you're distancing yourself from everyone so, in a way I think that's quite bad y'know so, I think if somebody wants to say something to you they should say something to somebody's face rather than y'know sort of just it's it's like sort of bitchy, bitchiness basically, and I think it's it's, those sort of things should be sort of said either in a nicer way or said in a harsh way to somebody's face so they can have a chance y'know to, straight away, rather than everybody I mean, cos anyone can access this so if you, say if you're making a public insult of somebody, on the FirstClass anybody in the whole class could view it, so I mean I think that is hurtful and y'know you can get quite ashamed and embarrassed y'know if somebody did that to you, so.
Marina

I I made a kind of jokey reference, something to do with christmas and christmas trees or something, and got flamed by some uh irritated woman who felt I was just kind of, in fact I was just responding to some joke about christmas trees, a little discussion started going about father christmas, um and, the flame, the flame kinda came, I was the last one to make that reference so it came to me about wasting time and space, y'know and cluttering up the internet with this kind of trivia, and that made me very, wary of, y'know not fully being able to read the entire social group that you're in, it made me aware that there were there were other people in that group, who weren't engaging in the more kinda social informal side of that discussion. so I suppose if anything I'm a bit in the

initial stages a bit kinda cautious until [pause] the feel of that group emerges a bit in case you put your foot in it.

how did you respond to that flaming?

um [pause] I don't think I did actually, I think my initial response was to flame back immediately and say kind of 'humourless, grumpy old thing' y'know 'scrooge, I'm not having christmas in your house' kind of thing [laughs].

[laughs]

you know 'it was only 3 remarks and this is all about our bonding in the group' and then I thought 'sod it, it's self evident'. but I but I was hurt by it, in that I was ang it made me angry, if not humiliated.
Richard

Chapter 8
Endnote

I have attempted, in this piece of work, to navigate a path through some of the cultural transformations affecting learners and teachers in higher education as we move into the digital age. I have tried to chart some of the disruption, disquietude and excitement generated at the interface of the 'analogue' and the 'digital' (Poster, 2001a), as we emerge into what Castells calls the 'information technology paradigm' (Castells, 1996a: 60-65). This is a paradigm characterised, according to Castells, by the primacy of information, the pervasiveness of the effects of the new technologies, their networking logic, technological convergence, and flexibility (this final factor has emerged in my thinking as *mutability*) (61-63).[1]

The effect of this paradigm shift, as I have seen it, has largely been to cause tension and dissonance among the subjects and systems which constitute the academy. Throughout this thesis, this dissonance has emerged as a series of oppositional forces expressed in different terms in each chapter: as a tension between Cartesian and postmodern modes of identity formation; as resistance to the modes of meaning construction enabled through digital textuality; as the deprivileging of the kinds of literacy made possible by shifting, networked texts; by the appropriation of 'smooth', networked pedagogical spaces by the logic of performativity; by the clash between 'digital' and 'analogue' modes of

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[1] It is interesting, however, that the scope and rigour of Castells' study leads him to take a perspective on the place of higher education in the technological paradigm which is almost identical to that of some of my more resistant interviewees:

> Schools and universities are paradoxically the institutions least affected by the virtual logic embedded in information technology, in spite of the foreseeable quasi-universal use of computers in the classrooms of advanced countries... In the case of universities, this is because the quality of education is still and will be for a long time, associated with the intensity of face to face interaction. (Castells, M. (1996a) *The information age: economy, society and culture, Volume 1: the rise of the network society,* Oxford: Blackwell).

authorship and knowledge legitimation; by the tension between the human and the posthuman.

The place of individual learners and teachers has been, simultaneously, to respond to these tensions, to create them and also to provide clues to their at least partial resolution. Thus I have tried throughout always to anchor my study to the texts I generated alongside these individuals.

I have tried also to tread a line between the utopic and dystopic visions of our technological present and future, a line which probes the anxieties and difficulties involved, while keeping an eye on what is exciting and engaging in the challenges presented by technological change. Alongside this has been the difficulty of providing a discussion of the power of technology to constitute the self and the social, while avoiding blunt determinism. Whether or not I have always avoided this latter point I have, throughout, found Castell's approach to be most helpful:

> "Kranzberg's First Law reads as follows: Technology is neither good nor bad, nor is it neutral." (Kranzberg, 1985: 50) It is indeed a force, probably more than ever under the current technological paradigm that penetrates the core of life and mind. But its actual deployment in the realm of conscious social action, and the complex matrix of interaction between the technological forces unleashed by our species, and the species itself, are matters of inquiry rather than of fate. (Castells, 1996a: 65)

It is not my intention in concluding this piece of work to close it off – for this reason I have named this short final chapter an endnote rather than a conclusion. I do, however, wish to identify some areas for future research which have emerged from this study.

Discussion in networked classrooms generates textual trails in the form of bulletin board records and transcripts of chat sessions. An added dimension to my findings from interviews would be gained by carrying out parallel textual analysis of these records, and seeing how the stories told to me by learners and

teachers interact with, contradict and confirm the perspectives emerging from the records of their interactions online.

Another area for future work might revolve around my conceptualisation of digital pedagogy as an approach to teaching which attempts to engage with the specificity of online text and subject. I would like to extend the case studies in chapter five – all drawn from North American universities – by researching additional examples, in particular those being attempted by academics working in the UK.

A related topic would focus on Deleuze and Guattari's theme of smooth and striated cultural space (Deleuze and Guattari, 1988). This would involve conducting further investigation of the way students and teachers speak about learning in 'smooth' web space, and comparing this with their perspectives on learning within the virtual learning environment. In addition, bearing in mind Deleuze and Guattari's focus on the importance of the 'passages' between and 'combinations' of the two types of space (500), I see the possibility of a more detailed investigation of the potential for smooth space to emerge from within the 'e-learning system'.

I identified, in the chapter on authorship, the significance of plagiarism and its changing terms within digital space. There is already a substantial literature on this topic, but I see room for further work within the parameters set out by my thesis. In addition to a consideration of currently-operating models and definitions of plagiarism, and an exploration of the alternatives, such a study would explore further students' and teachers' ways of defining the authentic and legitimate. In particular, it might try to establish how students' perceptions of digital, as opposed to print, text affects their appropriation of it in their academic work.

In my quite extensive discussions of digital textuality, I gave very little attention to the issue of the image, and to the possibilities for the nurturing of visual

literacy through the online mode. It would be interesting to further explore digital textuality in terms of an increased stress on visual, as opposed to purely linguistic, intelligence and its place in scholarly discourse.

The interviews I drew on in articulating the theme of embodiment were largely taken from discussions with learners engaged in programmes which blended the online mode with face to face teaching. A further study which attempted a more distinct comparison between distant and 'blended' learners, looking at their differing perceptions of embodiment and its implications would also, I suspect, prove interesting.

My final suggestions for further research emerge from the necessarily limited focus of this project. First, in its exclusive focus on western institutions and practices, it is guilty of the ethnocentrism Castells identifies as 'still dominating much social science' (Castells, 1996b: 3). At some point a similar investigation might be conducted which engaged with a more global view of pedagogic practice. Further, while I do draw on the insights of learners and teachers engaged in a scientific discipline, I think there is scope for a more detailed and sustained study of the impact of digital textuality on learners in the natural sciences in particular. And finally, there are new technologies for learning (such as wireless and mobile computing), and new forms of digital textuality (weblogs, for example), which have gained currency over the course of this project and which will provide a rich seam of possibility for future work.

And now to sum up and finish. I have tried to keep my study focused on the idea of pedagogy and culture, and on the notion of the emergence of a new cultural landscape in the classrooms of cyberspace. There is a richness of texture in these new cultures which my work has barely touched upon, but I have tried, particularly through the figures (mythological, historical and metaphorical) and emblems I have drawn upon, to gesture towards its intensity. For learners and teachers in higher education I see the difficulties, possibilities

and greatest challenges of the digital environment as being, primarily, a consequence of its qualitative *difference*:

a lot of my friends have the same ideas, in fact some of them haven't even got computers. she says 'I wouldn't know where to start'. I says 'well neither did I five years ago!' I says but I says 'it's something else, it is, it does weird and wonderful things!'.
Heather

God keep me from ever completing anything. This whole book is but a draught – nay, but the draught of a draught. Oh, Time, Strength, Cash, and Patience!
Melville, *Moby Dick*

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Appendix a
Questions at the beginning of the interview schedule

1. Introductory/icebreaking

1.1 How have you been using the internet, or other new technologies, for learning since you've been at university?

1.2 Can you describe some of the other ways in which you've been taught at university?

1.3 Do you use the internet, or other new technologies, for things other than learning? What do you use it for?

1.4 How technically competent would you say you are in relation to your fellow students?

1.5 How easy is it to get access to a computer at university? In your residence? At home?

1.6 How good are the computers you use at university? In your residence? At home?

1.7 From where do you most often use a computer/access the internet?

1.8 Can you tell me two or three good things about the online learning opportunities you have been involved with? And two or three bad things?

1.9 Overall, would you rate your online learning experience as worthwhile or not?

1.10 Would you like to do more online learning?

1.11 How good is your course generally – including the bits that are not delivered online?

1.12 Describe your best ever learning experience

2. Discourse/power/legitimation

2.1 How would you describe the relationship between you and your *tutor* online?

2.2 How is that relationship different than it might be in a face to face situation?

2.3 How would you describe the relationship between you and your *fellow students* online?

2.4 How is that relationship different than it might be in a face to face situation?

2.5 Do you 'talk' differently when you are communicating online than when you do so face to face?

2.6 Does your tutor 'talk' differently when they are communicating online than when they do so face to face? And your fellow students?

2.7 Do you feel secure when you are using the internet for learning?

2.8 Would you say that learning online liberates you or constrains you?

2.9 Does working online broaden or narrow down your *area* of study?

2.10 What about your *methods* of study – are they broadened or narrowed down?

2.11 Describe how you feel when you are working online with others (in discussion, emailing etc)

2.12 Describe how you feel when you are working online on your own (reading, researching etc)

2.13 What kind of rules apply regulating your language or behaviour when you work with others online? Where do these rules come from?

2.14 How are these different from the rules applying to face to face work?

2.15 What constitutes 'good' behaviour online?

2.16 Are you a 'good' online participant? How do you know?

3. Virtuality/the real

3.1 How would you feel about having a tutor who you only ever met online?

3.2 How would you feel about having peers you only ever met online?

3.3 Do you 'see' yourself differently online?

3.4 How do you 'see' others?

3.5 What does 'virtual' mean to you?

3.6 How is a physical classroom different from a virtual classroom?

3.7 Do you feel 'at home' in your virtual classroom?

3.8 Are computer-based learning environments real?

4. Language/presence/absence/text

4.1 What kind of metaphors might you use to describe the *structure* of the web – the way you experience it?

4.2 How would you describe the *content* of the web – what is it like compared with other media?

4.3 If you had to choose a single medium you feel happiest learning from, what would it be? Why?

4.4 What is using the web like in comparison to using other media?

4.5 When you communicate with your peers or tutor online, would you say you are speaking or writing?

4.6 Would you prefer to learn online or face to face? Why?

4.7 Is the web reliable? Do you trust what you find there?

4.8 How 'present' or 'real' is your tutor online?

4.9 How 'present' or 'real' are your peers online?

5. Subjectivity/embodiment/gender

5.1 What are you like when you are using the internet for communication at university e.g. in live chat or on bulletin boards? What kind of person are you (describe that person)?

5.2 Are you different from the 'you' you are at other times?

5.3 Which 'you' do you like best?

5.4 How would you describe your behaviour when working in an online group?

5.5 Would you rather communicate with your *tutor* electronically (via email or chat) or face to face? Why?

5.6 Would you rather communicate with your *fellow students* electronically (via email or chat) or face to face? Why?

5.7 What words would you use to describe your relationship with your computer?

5.8 Have computers changed the way you learn?

5.9 Have computers changed you?

5.10 Do you think that being male/female affects your attitude to/relationship with using technology for learning? How?

Appendix b
Core questions by the end of the interview schedule

1. Introductory/icebreaking

1.1 How have you been using the internet, or other new technologies, for learning since you've been at university?

1.2 How technically competent would you say you are in relation to your fellow students?

1.3 What was the best thing that happened to you in your online classroom?

1.4 What was the worst?

2. Discourse/power

2.1 What was the relationship between you and your tutor like online? Was it different to how it was/might have been face to face?

2.2 What was your relationship with the other students like online?

2.3 Do you 'talk' differently when you are communicating online than when you do so face to face?

2.4 Do you feel secure when you are using the internet for learning?

2.5 What kind of rules apply regulating your language or behaviour when you work with others online? Where do these rules come from?

3. Virtuality

3.1 How would you feel about having a tutor and fellow students who you only ever met online?

3.2 Do you 'see' yourself differently online?

3.3 What does 'virtual' mean to you?

3.4 Are computer-based learning environments real?

4. Language/presence/absence/text

4.1 What metaphor would you use to describe the web – what's it like?

4.2 When you communicate with your peers or tutor online, would you say you are speaking or writing?

4.3 What's it like reading a web page? How is it different from reading print?

5. Subjectivity/embodiment/gender

5.1 What are you like when you're communicating online, what kind of person are you?

5.2 Are you different from the classroom you?

5.3 What words would you use to describe your relationship with your computer?

5.4 Have computers changed the way you learn?

5.5 Have computers changed you?

5.6 Do you think that being male/female affects your attitude to/relationship with using technology for learning? How?

Published work

6. It became evident that the structure imposed by NUD*IST™ is limited and that an XML based editor would allow both more flexible coding and search techniques supported by XSLT, if the tracking facilities provided by NUD*IST™ could be reproduced.

7. The term is used loosely here; mathematicians would prefer the term lattice.

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11 disciplinary power in online learning environments

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11.1 Overview

This chapter considers a little-discussed aspect of online learning - the surveillance or 'student tracking' capabilities of virtual learning environments (VLEs). In, at least, the two main commercially available VLEs – Blackboard and WebCT – sophisticated, powerful, easy-to-use means of collecting data on students' activities within the learning space are built in as part of its pedagogical functioning. Where such surveillance tools are often promoted, and accepted, as useful ways of evaluating course effectiveness through helping us to understand student usage of the online facility, we wish to probe a little deeper and think about some of the broader cultural and pedagogical implications of using these tracking devices.

The chapter uses a theoretical framework drawn from the work of Foucault and from more recent theoretical approaches to privacy within cyberspace. It begins by giving a brief overview of the kinds of surveillance tools which we have access to in WebCT and Blackboard, moving on to the application of Foucault's panopticon metaphor to such facilities, and finally examining the implications of their use for educational practice.

The unifying theme of our discussion relates to the way in which the individuality of our learners is affected by the use of cyberspace as a learning environment. We believe that the learning environments we use work to develop certain kinds of learners, thus the subjectivity of the online learner is our central concern.

11.2 Introduction: tracking students in virtual learning environments

Murray Goldberg, WebCT developer, asks in his online newsletter, 'It's 10pm, do you know where your students are?' (Goldberg, 2000). He goes on to describe how the rationale for the development of the student tracking tools in WebCT grew out of his own experience of teaching online. The tools are, indeed, extensive. WebCT allows tutors to track the date and time of students' first and last logins, which pages each individual student has accessed and when, the total number of times the student has accessed the system, and for every section of the course to track the number of discussion board articles each student has opened and the number and date of each student's own discussion board contributions (see Figures 11.1 and 11.2).

Full Name: Student 1 User ID: student

First login: Feb 02, 2001 16:03 Last login: Jun 22, 2001 16:31

Total number of accesses: 968 Last page visited: Homepage

Show history of content pages visited

Distribution of Visits for Student 1

Page	Count
Homepage	195
Tool Pages	187
Glossary	1
Discussions	**Count**
Articles Read	482
Original Posts	31
Follow-up Posts	72

Figure 11.1 WebCT – date and time of one student's first and last login, total number of accesses and hits to each content page

History of Content Pages Visited by Student 1

[Prev 10 Visits] [Next 10 Visits]

	Page Name	Time of Access
4	Page Editor: Designer Buttons	Tue, 27 Jul 15:41:43 1999
3	Page Editor: Button Bar	Tue, 27 Jul 15:41:29 1999
2	Page Editor: Delete Path Pages	Tue, 27 Jul 15:41:26 1999
1	Page Editor: Designer Buttons	Tue, 27 Jul 15:40:04 1999

Figure 11.2 WebCT – history of pages visited by student, with dates and times

Class records can be generated allowing tutors to organise their students according to frequency of accesses to the course, by date of first or last access, or by the number of discussion board items opened or posted (see Figure 11.3).

WebCT's main out-of-the box virtual learning environment rival, Blackboard, has a similar suite of surveillance tools, enabling records to be generated showing for each individual user the total number of accesses to the course as a whole, the total number of accesses to each individual area and page of content, number of accesses over time, accesses per day of the week and by hour of the day. With both VLEs the tutor can also, of course, keep permanent records of the more obviously 'visible' activities undertaken by the student – the number, time and quality of contributions to discussion boards, emails exchanged between tutor and student, results from online quizzes (those intended for self- or formative assessment as well as those which are summative)

These tools are far more than the electronic equivalent of the attendance sheet. As in so many arenas, computers have enabled us to do things that were previously impossible or very difficult. VLE surveillance tools record every move a student makes within the learning

Page: All Previous Page Next Page

Personal Information		Access Information			Articles	
Full Name	User ID	First Access	Last Access	Hits	Items Read	Posted
[redacted]	[redacted]	Mar 23, 2001 17:11	Apr 24, 2001 14:07	33	17	0
[redacted]	[redacted]	Feb 09, 2001 14:24	Jul 13, 2001 14:37	127	52	3
[redacted]	[redacted]	Feb 05, 2001 22:16	May 10, 2001 15:10	139	48	0
[redacted]	[redacted]	Feb 10, 2001 06:18	Jul 03, 2001 12:20	146	114	21
[redacted]	[redacted]	Feb 05, 2001 13:52	Jun 04, 2001 13:31	189	112	19
[redacted]	[redacted]	Feb 07, 2001 11:05	Jun 15, 2001 16:35	219	115	9
[redacted]	[redacted]	Feb 05, 2001 11:34	May 28, 2001 09:06	249	157	26
[redacted]	[redacted]	Feb 02, 2001 10:37	Apr 10, 2001 12:43	264	88	10
[redacted]	[redacted]	Feb 06, 2001 19:43	May 18, 2001 15:01	316	179	17
[redacted]	[redacted]	Feb 05, 2001 12:43	Jun 15, 2001 13:25	332	181	15
[redacted]	[redacted]	Feb 02, 2001 16:03	Jun 22, 2001 16:31	968	482	103

Figure 11.3 WebCT – list of students organised by number of times they have accessed course

By Date	Hits	%
Tue Jun 26, 2001	86	86.8
Fri Jul 13, 2001	13	13.1

By User	Hits	%
[redacted]	99	100

By Day of Week	Hits	%
Sunday	0	0
Monday	0	0
Tuesday	86	86.8
Wednesday	0	0
Thursday	0	0
Friday	13	13.1
Saturday	0	0

Figure 11.4 Blackboard – number and date of hits to a particular section of course by one user

By Hour of the Day

12a	1a	2a	3a	4a	5a	6a	7a	8a	9a	10a	11a	12p	1p	2p	3p	4p	5p	6p	7p	8p	9p	10p	11p
0	0	0	0	39	38	0	9	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1 AM	0	(0 %)	9 AM	13	(13.1 %)	5 PM	0	(0 %)
2 AM	0	(0 %)	10 AM	0	(0 %)	6 PM	0	(0 %)
3 AM	0	(0 %)	11 AM	0	(0 %)	7 PM	0	(0 %)
4 AM	39	(39.3 %)	12 AM	0	(0 %)	8 PM	0	(0 %)
5 AM	38	(38.3 %)	1 PM	0	(0 %)	9 PM	0	(0 %)
6 AM	0	(0 %)	2 PM	0	(0 %)	10 PM	0	(0 %)
7 AM	9	(9.09 %)	3 PM	0	(0 %)	11 PM	0	(0 %)
8 AM	0	(0 %)	4 PM	0	(0 %)	12 PM	0	(0 %)

Figure 11.5 Blackboard – number of the user's hits to a particular section by hour of the day

information systems to form what is currently generally called a managed learning environment (MLE), anyone wishing to generate a student record walks through an even richer information landscape. Similarly, system administrators may extract information at a similar level of detail from almost any networked activity, whether undertaken by students or staff. However, where previously to track activity within a web-based learning environment would have involved the deliberate, rather complex analysis of log files and server statistics (something for which the majority of us would have neither the time nor the inclination), within VLEs surveillance is a casual act – sophisticated and detailed reports on individual students can be obtained with a couple of mouse clicks. Further, such tracking tools are included in learning environments as an integral element of their *pedagogical* functioning. Goldberg, for example, describes how by enabling continual evaluation, such tools simply help him to be a better online educator, providing higher quality web-based courses:

> [the] benefit is all in the name of continually trying to improve my course offering, not only in response to direct student comments, but also in response to the way students are interacting with the course. Without this activity tracking I would be in the dark... (Goldberg, 2000)

The aim of this chapter is not to deny the usefulness to tutors of such facilities, and we wish to avoid succumbing to the techno-paranoia which sometimes accompanies explorations of the impact of 'dataveillance' (Clarke, 1991). Rather we wish to render strange an element of online learning which risks becoming banal, a matter of 'common sense', and to explore what we see as some important cultural and pedagogical implications of using such tools, from which we might hazard some tentative recommendations for practice. As McLuhan argues, technology is not neutral: 'technological environments are not merely passive containers of people but are active processes that reshape people and other technologies alike' (McLuhan, 1962, p. iv). The wish to avoid accusations of technological determinism should not prevent us from looking closely at how our technologies change the way we work and the way we experience ourselves and others.

The framework for our discussion is provided largely by Foucault, and it is his perspective which perhaps most usefully indicates our approach:

> My point is not that everything is bad, but that everything is dangerous, which is not exactly the same as bad. If everything is dangerous, then we always have something to do. So my position leads not to apathy but to a hyper- and pessimistic activism. (Foucault, 1983, pp. 231–2)

11.3 The panopticon as metaphor

The imagery of the panopticon is regularly drawn on in discussions of cyber-surveillance (for example see Bowers, 1988; Gandy, 1996; Lyon, 1993; Poster, 1996; Provenzo 1992; Spears and Lea, 1994; Zuboff, 1988)[1] and does indeed provide a powerful metaphor for thinking about the way in which power relations are constructed in online environments.

In 1791, the English utilitarian philosopher Jeremy Bentham conceived of the architectural innovation of the panopticon as a way of achieving conformity and order within a 'humane'

way as to prevent any communication between prisoners. At the centre is the 'inspector's lodge' or observation tower from within which prison guards can see into every cell,

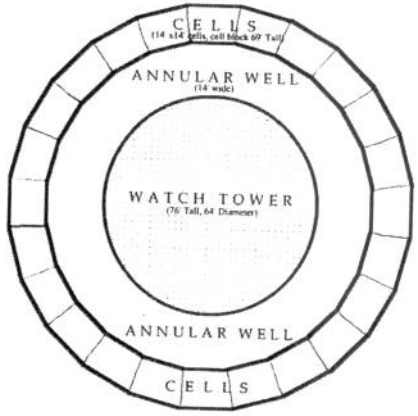

Figure 11.6 Plan view of the panopticon

without themselves being visible. The goal is the achievement of control through both isolation and the possibility of constant (invisible) surveillance (see Figure 11.6).

For Foucault (Foucault, 1979a) the panopticon encapsulates in its form the shift in the nature of power relations which took place during the seventeenth and eighteenth centuries. Where previously what Foucault refers to as sovereign power had exercised dominion through punishment of the physical body (physical torture, public execution), during this time a different, less visible, power mechanism emerged which Foucault calls disciplinary power. Disciplinary power is exercised over individual and collective bodies 'through surveillance and via a grid or network of material coercions which effected an efficient and controlled increase (minimum expenditure, maximum return) in the utility of the subjected body' (Smart, 1985, p. 80).

The panopticon, as one of the 'technologies of power' of this regime, functions less through the imposition of physical force than through its ability to bring about conformity through self-regulation. As subordinates are never sure when they are being observed, they have no alternative than to assume an unwavering surveillance and hence internalise the 'normalising regime'.

> He who is subjected to a field of visibility, and who knows it, assumes responsibility for the constraints of power; he makes them play spontaneously upon himself; he inscribes in himself the power relation in which he simultaneously plays both roles; he becomes the principle of his own subjection. (Foucault, 1979a, p. 203)

Disciplinary power is not only manifested in the workings of penal institutions. For Foucault it is identified with the power-knowledge nexus which is inherent in the workings of institutions throughout the social sphere, including educational institutions. It is

domination, the property of a particular individual, or group, or class. Rather it is a constituent element of contemporary society – it circulates throughout social relations like an energy. Hence Foucault's famous claim that 'where there is power, there is resistance' (Foucault, 1979b) – an issue we would like to return to later. Power, like surveillance, is not necessarily 'bad', but it is dangerous, with effects which are both positive and negative. As Ball points out, for example, 'Education works not only to render its students as subjects of power, it also constitutes them, or some of them, as powerful subjects' (Ball, 1990, p. 5).

It is not surprising that those theorising the place of privacy in the information society have seized on Foucault's analysis and the panopticon metaphor, seeing in computerised and video surveillance a full realisation of the principles of the panopticon. Computerised student tracking systems like the ones described above do appear to represent the perfect disciplinary apparatus, the single gaze that constantly observes everything.

Surveillance for Foucault is an element of the hierarchical observation which is a key instrument of disciplinary power. Hierarchical observation binds the concepts of visibility and power. There is an unequal power relationship between the seer and the seen – the visibility of the seen enables the seer to 'know' them, to alter them. Access to this knowledge, to this power, is of course unevenly distributed.

We have to bear in mind that in the everyday functioning of the virtual learning environment, the tutor, or 'course designer', has access to extensive surveillance tools, and the student does not.[2] Whatever truth there may be in the much-vaunted claims that computer mediated communication has the potential to do away with many of the cues through which hierarchical relationships and status differentials are inscribed (Dubrovsky, Kiesler and Sethna, 1991; Kiesler and Sproull, 1992; Sproull and Kiesler, 1991; Wiesband, 1992), the relation between teacher and learner is still (and perhaps necessarily) a hierarchical one, not least where the teacher is also the assessor. How comfortable should we be, however, with such ready, casual access to tools which so starkly represent the 'power of mind over mind' (Foucault 1979a)?

11.4 The subject

Hierarchical observation is only one of the instruments through which disciplinary power exercises itself. The two main others – normalising judgement and examination – are also well known to educators. Their collective effect is one of classification and division, rendering the subject 'knowable' through the collection of data relating to them. For Foucault, the file, the document and the record are powerful tools representative of the exercise of disciplinary power. It is partly through these that the individual is constituted, the subject objectified. The power to classify, to collect data relating to students, is hardly new in education, yet in the use of online surveillance tools we see it reaching a new level of depth and detail, representing a further extension of what Foucault calls the 'progressive objectification and the ever more subtle partitioning of individual behaviour' (Foucault, 1979a, p. 178). As Provenzo points out, 'this desire to partition individual student behaviour into ever more subtle units – to systematically collect data – is built into the structure of many computer education programs' (Provenzo, 1992, p. 185).

Foucault writes against the idea of the sovereign subject, the world view which sees the individual – the subject – as the foundation of knowledge and meaning. For Foucault, the subject does not exist prior to the exercise of power, the process of subjectification. Hence, within the panopticon, individuals are made to internalise the gaze of power, to adopt its

[illegible] they are thus formed by power – rather than seeing it as an external force being applied to a pre-existing, stable subject, it is power which makes us who we are. Disciplinary power is an element of what Foucault calls discourse, in which individual subjectivity is seen not as the possession of the conscious self, but as something which is dispersed throughout a network of external structures and practices:

> discourse is not the majestically unfolding manifestation of a thinking, knowing, speaking subject, but, on the contrary, a totality, in which the dispersion of the subject and his discontinuity with himself may be determined. It is a space of exteriority in which a network of distinct sites is deployed. (Foucault, 1966, p. 55)

It follows that discourse and practice are inseparable. Discourses are 'practices that systematically form the objects of which they speak' (Foucault 1974, p.49) – in other words, the discourses of pedagogy create both the teacher and the taught; the discourse/practice of technology-assisted learning creates both the online learner and the teacher or facilitator of online learning.

In this scheme we can see disciplinary apparatuses or 'technologies of power' (of which the virtual learning environment is an example) as being about creating a *certain type of subject*; in using these technologies we are therefore also involved in creating a certain type of subject, a certain type of learner. For Lyotard, predicting back in 1979 the impact of technology on education, the kind of learner being produced would be one who, in the name of enhanced performativity, would be an efficient, skilled user of information (Lyotard, 1979, p. 51). In the current discourse of learning technology we would be more likely to describe the kind of learner we are trying to produce as one who is 'active', 'independent', 'lifelong', 'flexible'. Applying the Foucauldian approach in any case problematises the notion that it is possible to place 'the learner' at the centre of the learning process. Instead, it would see the subjectivity of the learner as constituted through and by the learning environment and the discourses/practices within it. The practices of 'student centred learning', particularly perhaps in their online manifestations, normalise students through surveillance, observation and classification but rarely explicitly acknowledge that the developing individual is an 'object' produced by those same practices, rather than a secure, pre-existing subject.

11.5 The 'superpanopticon'

Cyberspace theory building on the work of Foucault highlights the way in which the virtual environment works to constitute the subjectivity of its users, restructuring the nature of individuality in the process. Poster (1996) analyses the particular impact on subjectivity of electronic databases, characterising the surveillance function of such technologies as a 'superpanopticon' (Poster, 1996). The superpanopticon constitutes individual 'subjectivities' according to its own rules. For example, within interlinked electronic databases, the fields and records containing an individual's details (name, age, sex etc.), highly limited by the determinations of the technology, actually become the 'retrievable identity' of that individual. In other words, the data held on an individual become, to borrow a term from Baudrillard, a 'simulacrum' of that individual – a copy which, as far as the imperative of the technology is concerned, has no original. For Poster therefore, computerised databases are 'nothing but performative machines, engines for producing retrievable identities' (p. 186). What is more, the individual has no control over, or even awareness of this 'other identity' which is circulating throughout the electronic network:

> Now, through the database alone, the subject has been multiplied and decentered, capable of being acted upon by computers at many social locations without the least awareness by the individual concerned yet just as surely as if the individual were present somehow inside the computer. (Poster, 1996, p. 184)

The data represented in the discourse of the database comes to stand for the subject in 'a highly caricatured yet immediately available form.'

> To the database, Jim Jones is the sum of the information in the fields of the record that applies to that name. So the person Jim Jones now has a new form of presence, a new subject position that defines him for all those agencies and individuals who have access to the database. (ibid., p.188)

Lyon (1994) characterises these representations as 'complementary selves' who are 'the sum, as it were, of their transactions'.

> New individuals are created who bear the same names but who are digitally shorn of their human ambiguities and whose personalities are built artificially from matched data. Artificial they may be, but these computer 'selves' have a part to play in determining the life-chances of their human namesakes. Thus are subjects constituted and deviants defined within the Superpanopticon. (p. 71)

We should not underestimate the extent to which this power to constitute and disperse the subject can be applied in virtual learning environments. While humanist ways of knowing might resist the idea that identity formation can take place outside the skin of the individual, we need to consider the possibility that the online student may be starkly objectified in her virtual construction, that 'the learner' may be, as far as our systems are concerned, to some extent constituted by records of their first login, last login, frequency of login, number of discussion board submissions, pattern of page visitation across the site, and so on. Such an identity might exist not only beyond the control of the individual learner, but its very existence – and the possibility of 'judgement' being applied to it either wittingly or not – might remain unknown to them. The literature is full of claims to the emancipatory potential of online communication in educational and other contexts, particularly in the way it enables us to reformulate ourselves and experiment with new identities. In our focus on the way in which we are able to 'make ourselves' in cyberspace however, we should not neglect the ways in which cyberspace technologies may also *make us*.

11.6 Implications for educational practice

11.6.1 Paradigmatic contradiction

The ethos of the MLE can be viewed in many ways as essentially managerialist. It is about order, efficiency, identified outcomes and control. The attraction of databases to the organiser of the MLE is not just their retrieval speed but their relational abilities and totalising nature. In its concern for control and managerial efficiency the MLE reveals its essentially modernist nature and its notion of an individualised rational and stable learner.

environments, relational databases) give rise to discourses/practices which constitute the subject in a decidedly different fashion, as multi-faceted, heterogeneous and dispersed.

Despite such heterogeneity and multiplicity however, the archival permanence promised by MLE databases militates in the opposite direction. Within such archival fixity and retrievability students will never be able to escape their past. There is a loss of redemptive possibility from the digital database which, according to Poster (1996, p. 182) is 'perfectly transferable in space, indefinitely preservable in time' and 'may last forever everywhere'. There is here no Whitmanesque notion of the subject as a perpetually reinventing 'self', self-redeeming. 'Do I contradict myself? Very well then I contradict myself, (I am large, I contain multitudes)' (Whitman, 1975, p. 123).

Within a managerialist paradigm the learner may be individualised, a unified subject, but is not the Romantic self. What is offered, rather, is a disempowering and constraining constitution of the subject. And yet the poststructuralist interpretation of these technologies, as interpellating the subject within a primarily linguistic environment (in which even the databases themselves are a form of writing, of language) offers a multiplicity, fragmentation and re-signification of the subject which, in its uncertainty and instability is the antithesis of the certainty and permanence that managerialism endeavours to achieve.

11.6.2 Insouciance

Perhaps because our current theories of learning are inadequate to explain and analyse the discursive practices that are now emerging within new technologies there appears to be a lack of critique or even a certain insouciance in regard to the (often occluded) effects of these rapidly developing new practices. We are reminded of President Richard Nixon's confident assertion at the onset of Watergate that 'The country doesn't give much of a shit about bugging ... most people around the country think it's probably routine, everybody's trying to bug everybody else, it's politics' (cited in Marx, 1996, p. 193). Though the American public were later to demonstrate their concern about his political mendacity his observation about the public perception of surveillance may not have been inaccurate. Provenzo (1992), for example, suggests that:

> students learn that surveillance is part of their education. Mastering the new computer literacy implies the acceptance that information will be automatically collected and that in turn control will be exercised. (p.186)

He cites Bowers, who argues that this kind of student experience might be deemed 'essential to the development of the socially responsible citizen, and thus it could be expected to view it as a normal, even necessary, aspect of adult life'. (Bowers, 1988, p. 19). Our own interviews with practitioners in UK higher education reveal a similar outlook:

> Now students don't mind. We speak to students. They don't care. They expect ... they know they're being logged. They're quite astonished to find they're being logged as little as they are. There seems to be, at least with them, an idea that it's acceptable to be logged through their educational activities. There are other activities where they wouldn't, which are more social or more exploratory. But they expect, for every crossed knees and twitch they make, that we try and log that. (Interview Respondent, 2001)

configuration of unconsciousness, indirection, automation, and absentmindedness both on the part of the producer of the database and on the part of the individual subject being constituted by it' (Poster, 1996, p. 187 [SEB3]).

Insouciance notwithstanding, it is important to bear in mind that UK Universities have a responsibility to comply with the Data Protection Act of 1998, which raises the interesting issue of whether certain tracking activities within V/MLEs are actually legal under current European legislation. Discussions with University Data Protection Officers lead one to conclude that the, as yet, mainly untested application of the law to University practice remains something of a'grey area'.

> The whole environment in which we're working is dynamically locking down on our responsibilities, on what we can and cannot do ... I have my doubts at three o'clock in the morning that we potentially could have a problem under the Data Protection Act because we don't have a full disclosure. We are very concerned about it. We keep ourselves as informed about it as possible. (Interview respondent, 2001)

11.6.3 Policies of acceptable use

The requirements of the Act, not to mention professional and ethical obligations, give rise to questions of what constitutes acceptable use of such technologies. Any code of practice, we suggest, would need to address a range of issues, principally to:

- adhere to the principle of informed consent;
- specify which activities are tracked and for what purpose;
- grant students (and staff) the right to see (their own) database;
- grant third party (External examiners?) the right to check usage of data (more inspection!);
- issue a clear statement/policy of how long databases would be kept (e.g. for appeal purposes only? for three months after resits?);
- reach agreement on who 'owns' the database and to which other parties it might be made available (e.g. would QAA inspectors/externals have right to view it? – and which parts?) and with which other databases it might be made 'relational';
- * address the legal implications of operating franchises and other web-based activities outside European boundaries

However these measures, if implemented, probably have limited value. Such ethical responses tend to be those of Marxist analysts or Liberal commentators such as Lyotard (1979) who, in their wish to democratise information, assume a relatively unblurred demarcation of private from public spheres, and a separation of knowledge from power. They posit the existence within these environments of learners who are centred, autonomous subjects, rational actors for whom rationality is equated with freedom or political emancipation. However, from a poststructuralist perspective, databases preclude such agency. There is no direct equation of increased access to data = increased knowledge = increased power.

> no longer is effected by alienated power but by entirely new articulations of technologies of power. The cultural function of databases is not so much the institution of dominant power structures against the individual as it is the restructuring of the nature of the individual. ..the viewpoint that I am proposing posits a different relation of knowledge and power, one in which knowledge itself is a form of linguistic power, the culturally formative power of subject constitution (Poster, 1996, p. 190[SEB4]).

11.6.4 Interpretation of tracking data

Interviews with practitioners provide salutary reminders that the interpretation of V/MLE surveillance data can often be misleading. What does the pattern of logging activity actually mean? What does the data really signify? Using the classifications and divisions provided by V/MLE tracking activity to make judgements of student performance or intention appears fraught with dangers of misreading, misinterpretation and assumption.

> The reporting is more important than the actual raw data ... It's not terribly useful for us and I really question whether it's particularly useful for Blackboard or WebCT because what you're actually capturing is not what's actually going on. You're capturing what you think's going on. The student may actually just look at a page, print it off, take it away or they can print off three copies for their friends or their friend is sitting next to them or they accidentally go to some pages or they do a quick flick through the pages to make sure they've covered all the things, the questions that they know there might be teaching about. You're not actually capturing what you think you're capturing. What you're capturing is only that that page has at any time been looked at by that student. That can be exceptionally misleading. (Interview respondent, 2001)

The need to minimise the degree of interpretability of data assumes particular importance when it is used as the basis of assessment or other formative judgements. Caution and active inhibition would appear to be the operative watchwords:

> Anybody you interview who's using WebCT or Blackboard, slap them round the face and say 'Do you know what you're doing?' – because I bet they don't! (*laughs*). (Interview respondent, 2001)

11.6.5 The role of the tutor

A final consideration is the way in which the subjectivity of the tutor becomes constituted through the discourses and practices of computer mediated learning environments. Though the discourse of flexible or student-centred learning might position or interpolate the tutor as 'moderator' or 'facilitator', the forms of agency inherent in practice within a surveillant online environment might include more problematic roles of monitoring, recording, interpreting and forwarding online data. Tutors, of course, are 'seers' of their students but 'seen' by managers.

> By means of surveillance, disciplinary power became an integrated system ... it also organized as a multiple, automatic and anonymous power; for although surveillance rests on the individual, its functioning is that of a network of relations from top to bottom ... and laterally this network holds the whole together and traverses it in its entirety with effects of power that derive from one another: supervisor perpetually supervised. (Foucault, 1979a, p. 177).

advise their students. One tutor was identified as having never registered or accessed the database and was deemed by managers to be potentially unsuitable to remain within the role, though such deliberations went on unknown to the tutor concerned. This reconstitution of the subject, through the *absence* of a data record, has a peculiarly postmodern complexion.

Academic staff also need to be aware of both the changes in authority and the more diverse forms of agency that can arise in online learning environments.

> There's a major underlying factor which I don't think they'd even admit to but they're afraid of losing their power. By introducing the [*name of VLE*] system we have introduced into the power equation issues of who controls, who monitors, who watches the [*name of degree*] progress. We've suddenly got developers in there, we've suddenly got the learning technology section in there who by holding on to, creating and capturing this information are suddenly incredibly powerful because that's the node to where everything goes. So in that respect there are major concerns about whether we should be there at all, about whether the power should be devolved. From personal positions of being threatened, of losing power, of losing influence and control of what's going on, both from their own personal point of view about advancement, responsibility and respect as well as professionally about 'Should we lose this power?'. So there's a fundamental point about when you introduce a V or MLE you are going to change power balances – you can't help doing that in quite a fundamental and significant way, that the power structures will change. (Interview respondent, 2001)

11.7 Conclusion

The preceding discussion gives rise to a more fundamental concern in relation to learning within virtual and managed learning environments. This concern relates to humanist tendencies within currently predominant theories of learning in higher education to posit learners primarily as unified and stable subjects. Such analyses tend to emphasise and privilege notions of interior processing (the 'deeper' the learning the better) and cognitive restructuring. Transformation is sought to a more *reflective*, i.e. more fully interiorised, individualised and unified subject. Currently available learning theory appears increasingly inadequate to deal with the complexities of agency, discursive practice, identity and subjectivity within virtual learning environments. We suggest, therefore, that we need to identify and understand forms of agency and learning appropriate to the dispersed, multiple subject characteristic of V/MLEs.

Interesting incursions have been made into such a project, for different purposes, by feminist theorists of technology. Haraway's concept of the cyborg self, for example, examines redefinitions of the power-knowledge-body equation through the possibility of the merging of self and machine. If, for Foucault, the body held a primary position within the regime of sovereign power (which exercised control through bodily punishment), which was then displaced to a secondary position by the emergence of disciplinary power, we see it relegated now to a tertiary position by the power of new technology to blur the boundaries between self and network, to disperse the subject in cyberspace, to remove 'subjectivity' from the body. For Haraway, it is this very blurring of boundaries which constitutes such technologies as sites for resistance. As she puts it:

> organism and machine and similar distinctions structuring the Western self. It is the simultaneity of breakdowns that cracks the matrices of domination and opens geometric possibilities. (Haraway, 1989, p. 174)

We may, like Haraway, take comfort from the subversive possibilities of the cyborg self, or we may view with disquietude the way in which new technologies appear to represent an extreme manifestation of how a technology of power can achieve control by the total and thoroughly disempowering constitution of the subject. In either case, our chances of developing effective pedagogies for online learning will be greatly enhanced if we are prepared to recognise and work with the new modes of identity formation and new articulations of power/knowledge which cyberspace technologies represent.

Notes

1. The majority of these discussions focus on surveillance and privacy in the workplace, the marketplace and in the functioning of the State, rather than on education *per se*.

2. An interesting exception is the conferencing software FirstClass, in which the hardly extensive, but functional, 'message history' tool is equally available to both. 'Message history' allows users to track who has read any given message, and when.

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12 Variation in the experience of learning technologies in teaching in art, design and communication: implications for network dissemination strategies

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This study explores the qualitatively different ways that teachers of art, design and communication experience learning technologies.

There has been empirical identification of qualitatively different ways of conceiving of, and approaching teaching in higher education. Relations have been discovered between teachers' approaches to teaching and their perceptions of the teaching context (Martin and Balla, 1991; Prosser and Trigwell, 1997, 1999; Trigwell, Prosser and Taylor, 1994). More importantly, relations have also been found between teachers' approaches to teaching and students' approaches to learning (Trigwell, Prosser and Waterhouse, 1999), linking the two previously separate research areas.

One element of the context of teaching is teachers' experience of learning technologies.

This study of teachers' perceptions forms the point of departure for this chapter. The data is from an interview study of 24 teachers and is explored with a phenomenographic approach. The chapter adopts a second-order perspective on perceptions of the use of learning technologies in the context of teaching in art, design and communication departments. Teachers were asked to describe their experience of using learning technologies; this chapter focuses mainly on describing key aspects of the variation in that experience.

The chapter commences with an exploration of research into learning and teaching which supports the student-focused approach. The principle of teachers' awareness of their learning and teaching situations to improve learning and teaching is examined in relation to this. The importance of teachers' becoming aware of their conceptions and context are key principles underpinning academic development (Prosser and Trigwell, 1999). The results reported in this chapter provide a mechanism for this action.

Implications for network dissemination strategies are discussed in the context of increasing awareness among teachers of art, design and communication where there has been less adoption of the uses of learning technologies.

The findings central to this paper are the categories of description of variation in the experience of learning technologies, these categories are described and further discussed with extracts from the interview data.

This chapter goes on to highlight strategies which explore approaches to teaching, or of becoming a facilitator of learning (Forsyth, 1996). The key conclusion is that academic development should include all members of a work group in order to generate a commitment to change and agree on ways to achieve this (Inglis *et al.*, 1999; Knight and Trowler, 2000).